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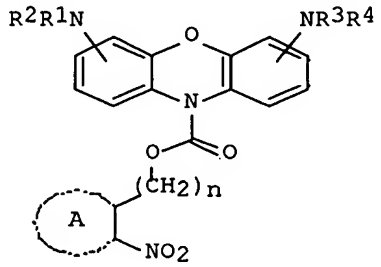
L4 ANSWER 1 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 2003:767793 CAPLUS
DN 139:261307
TI Preparation of phenoxazine derivative for use as radiation-induced coloring material
IN Tokita, Sumio; Tachikawa, Tatsuya
PA Saitama University, Japan
SO Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2003277368	A2	20031002	JP 2002-84898	20020326
PRAI JP 2002-84898		20020326		

OS MARPAT 139:261307
GI

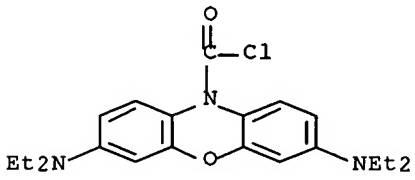


I

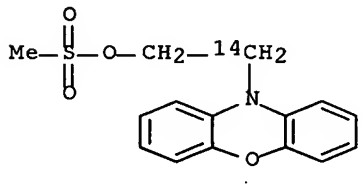
AB The patent relates to the prepn. of phenoxazine deriv. I (wherein R1, R2, R3, R4 = hydrogen, alkyl; A = aryl; n = 1-5 integer) for use as radiation-inducible coloring material in color films. Thus, a titled compd. prepd. by the reaction of 3,7-bis(diethylamino)-10-chloroformylphenoxazine and sodium o-nitrobenzyl alcoholate was dissolved in acetonitrile and irradiated with 60Co .gamma. ray and gave color absorption at 643.5 nm.

IT **83531-24-2P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(prepn. of phenoxazine deriv. for use as radiation-induced coloring material)

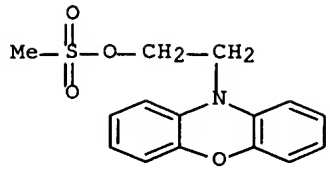
RN 83531-24-2 CAPLUS
CN 10H-Phenoxazine-10-carbonyl chloride, 3,7-bis(diethylamino)- (9CI) (CA INDEX NAME)



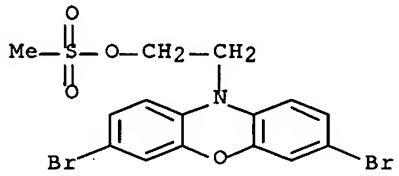
L4 ANSWER 2 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 2003:338652 CAPLUS
DN 139:230695
TI ragaglitazar[14C] and [3H]-labeling of ragaglitazar: A dual acting PPAR.alpha. and PPAR.gamma. agonist with hypolipidemic and anti-diabetic activity
AU Kristensen, Jesper B.; Johansen, Steen K.; Valsborg, Jacob S.; Martiny, Lars; Foged, Christian
CS Novo Nordisk A/S, Malov, DK-2760, Den.
SO Journal of Labelled Compounds & Radiopharmaceuticals (2003), 46(5), 475-488
CODEN: JLCRD4; ISSN: 0362-4803
PB John Wiley & Sons Ltd.
DT Journal
LA English
AB Currently, Ragaglitazar is being developed as a drug for the treatment of hyperglycemia and hyperlipidemia in patients with type 2 diabetes. Here, we report the labeling of Ragaglitazar with carbon-14 and tritium for in vivo and in vitro investigations. Two different carbon-14 labeled as well as two different tritium labeled tracers of Ragaglitazar were synthesized. The carbon-14 label was introduced from either Et bromo[2-14C]acetate (5 steps/33% overall yield) or [U-14C]phenoxazine (4 steps/48% overall yield). Tritium was incorporated either by catalytic tritiation of an alkene precursor followed by chiral HPLC sepn. (2 steps/17% overall yield) or by catalytic tritium-halogen exchange of an aryl bromide precursor (2 steps/68% overall yield).
IT **591746-91-7P**, 10H-Phenoxazine-10-ethanol-2-14C methanesulfonate **591747-02-3P 591747-14-7P**, 6,14-Dibromophenoxazine-10-ethanol methanesulfonate
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
([14C] and [3H]-labeling of ragaglitazar (dual acting PPAR.alpha. and PPAR.gamma. agonist with hypolipidemic and anti-diabetic activity))
RN 591746-91-7 CAPLUS
CN 10H-Phenoxazine-10-ethanol-.beta.-14C, methanesulfonate (ester) (9CI) (CA INDEX NAME)



RN 591747-02-3 CAPLUS
CN 10H-Phenoxazine-10-ethanol, methanesulfonate (ester), labeled with carbon-14 (9CI) (CA INDEX NAME)

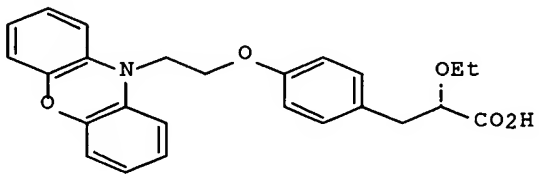


RN 591747-14-7 CAPLUS
CN 10H-Phenoxazine-10-ethanol, 3,7-dibromo-, methanesulfonate (ester) (9CI) (CA INDEX NAME)



RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 3 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 2003:155400 CAPLUS
DN 138:338116
TI Synthesis and Biological and Structural Characterization of the Dual-Acting Peroxisome Proliferator-Activated Receptor .alpha./.gamma. Agonist Ragaglitazar
AU Ebdrup, Soren; Pettersson, Ingrid; Rasmussen, Hanne B.; Deussen, Heinz-Josef; Jensen, Anette Frost; Mortensen, Steen B.; Fleckner, Jan; Pridal, Lone; Nygaard, Lars; Sauerberg, Per
CS Novo Nordisk Park, Novo Nordisk A/S, Maalov, 2760, Den.
SO Journal of Medicinal Chemistry (2003), 46(8), 1306-1317
CODEN: JMCMAR; ISSN: 0022-2623
PB American Chemical Society
DT Journal
LA English
OS CASREACT 138:338116
GI



I

AB An improved synthesis of the human peroxisome proliferator-activated receptor (PPAR) agonist ragaglitazar I and its mono-L-arginine salt are given. Olefination of 4-(benzyloxy)benzaldehyde with Et 2-(diethylphosphinyl)-2-ethoxyacetate followed by palladium-catalyzed hydrogenation and cleavage of the benzyl protecting group provides Et 2-ethoxy-3-(4-hydroxyphenyl)propanoate. Enzymic hydrolysis and kinetic resoln. of Et 2-ethoxy-3-(4-hydroxyphenyl)propanoate in the presence of Pectinex Ultra SP-L (Novozymes A/S) provides nonracemic 2-ethoxy-3-(4-hydroxyphenyl)propanoic acid in 39% yield. Esterification of 2-ethoxy-3-(4-hydroxyphenyl)propanoic acid with thionyl chloride and isopropanol, alkylation of the phenol with 2-(10-phenoxazinyl)ethyl mesylate and hydrolysis of the iso-Pr ester with sodium hydroxide provides I. The L-arginine salt of I is prepd.; the salt is nonhygroscopic and retains its crystal form under a variety of environmental conditions, making it an appropriate compn. for use in tablets (no data). I has high affinity for the hPPAR.alpha. and -.gamma. receptors with IC50 values of 0.98 and 0.092 .mu.M, resp. Crystal structures of the mono-DMSO solvate of the L-arginine salt of I and of I bound to the ligand-binding domain of PPAR.gamma. are detd. In addn., the conformations of a variety of PPAR inhibitors bound to PPAR.alpha., PPAR.gamma., and PPAR.delta. are detd. computationally. The conformation of ragaglitazar bound to the hPPAR.gamma. receptor differs from the single-crystal structures of the L-arginine salt of ragaglitazar, with significant differences in the orientation of the phenoxazine ring system. The lack of hPPAR.delta. activity could be explained by the absence of binding in the tail-up pocket in the hPPAR.delta. receptor, in contrast to the hPPAR.delta. agonist GW2433, which was able to bind in both the tail-up and tail-down

pockets of the receptor.

IT **222835-09-8P**

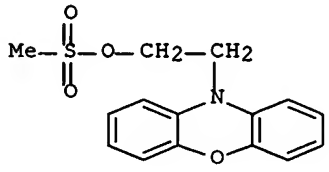
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

(Reactant or reagent)

(enantioselective prepn. of the PPAR agonist ragaglitazar using an enzymic hydrolysis and kinetic resoln. as the key step)

RN 222835-09-8 CAPLUS

CN 10H-Phenoxazine-10-ethanol, methanesulfonate (ester) (9CI) (CA INDEX NAME)

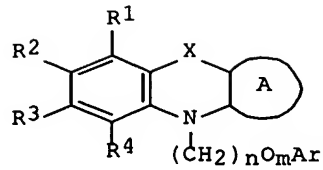


RE.CNT 72 THERE ARE 72 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 4 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 2002:655084 CAPLUS
DN 137:201319
TI Preparation of .beta.-aryl-.alpha.-oxy substituted alkylcarboxylic acids as hypolipidemic, antihyperglycemic, antiobesity, and hypocholesterolemic agents
IN Lohray, Braj Bhushan; Lohray, Vidya Bhushan; Bajji, Ashok Channaveerappa; Kalchar, Shivaramayya; Paraselli, Rao Bheema; Gurram, Ranga Madhavan; Ramanujam, Rajagopalan; Chakrabarti, Ranjan
PA Reddy's Research Foundation, India; Reddy-Cheminor, Inc.
SO U.S., 43 pp., Cont.-in-part of U.S. 6,054,453.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6440961	B1	20020827	US 1999-257104	19990224
	US 6054453	A	20000425	US 1998-12585	19980123
	GB 2380997	A1	20030423	GB 2002-30280	19980123
	GB 2380997	B2	20030702		
	WO 2000050414	A1	20000831	WO 1999-IB683	19990416
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	AU 9929537	A1	20000914	AU 1999-29537	19990416
	NZ 513689	A	20010928	NZ 1999-513689	19990416
	EP 1155006	A1	20011121	EP 1999-910638	19990416
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	BR 9917155	A	20020423	BR 1999-17155	19990416
	JP 2002537390	T2	20021105	JP 2000-600997	19990416
	EE 200100446	A	20021216	EE 2001-446	19990416
	US 6548666	B1	20030415	US 2001-853176	20010510
	US 6608194	B1	20030819	US 2001-853177	20010510
	HR 2001000612	A1	20021231	HR 2001-612	20010822
	NO 2001004102	A	20011024	NO 2001-4102	20010823
	BG 105925	A	20020628	BG 2001-105925	20010920
PRAI	IN 1997-MA2416	A	19971027		
	US 1998-12585	A2	19980123		
	GB 2000-10176	A	19980123		
	US 1999-257104	A	19990224		
	WO 1999-IB683	W	19990416		

OS MARPAT 137:201319
GI



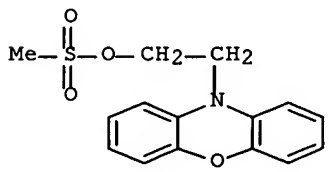
$(CH_2)_nO_mArCHR^5CR^6(OR^7)COYR^8$ I

AB .beta.-Aryl-.alpha.-oxy substituted alkylcarboxylic acids I [R1-4 = H, halo, OH, NO2, CN, CHO, etc.; A = 5-6 membered (hetero)cycle; X = O, S; Ar = (un)substituted divalent arom. or heterocyclic group; R5 = H, OH, alkoxy, halo, alkyl; R6 = H, OH, alkoxy, halo, alkyl group, acyl, (un)substituted aralkyl or forms a bond together with R5; R7 = H, (un)substituted alkyl, cycloalkyl, aryl, aralkyl, etc.; R8 = H, alkyl, cycloalkyl, aryl, aralkyl, etc.; Y = O, NR10; R10 = H, alkyl, aryl, hydroxyalkyl, aralkyl, heterocyclyl, heteroaryl, heteroaralkyl groups; R8, R10 together form a 5 or 6 membered (hetero)cycle; n = 1-4; m = 0-1] were prepd. E.g., 3-[4-[2-(phenoxazinyl)ethoxy]phenyl]-2-hydroxypropanoic acid was prepd. Example compds. were shown to possess peroxisome proliferator activated receptors, PPAR-.alpha. and PPAR-.gamma. and shown to inhibit HMG CoA reductase. I are used to treat diabetes caused by insulin resistance.

IT **222835-09-8**, 10H-Phenoxazine-10-ethanol, methanesulfonate (ester)
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of .beta.-aryl-.alpha.-oxy substituted alkylcarboxylic acids as hypolipidemic, antihyperglycemic, antiobesity, and hypocholesterolemic agents)

RN 222835-09-8 CAPLUS

CN 10H-Phenoxazine-10-ethanol, methanesulfonate (ester) (9CI) (CA INDEX NAME)

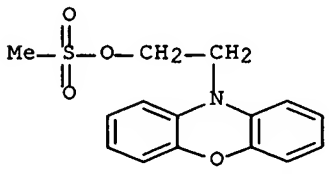


RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 5 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 2002:332176 CAPLUS
DN 136:340686
TI An improved process for the preparation of 2-(phenoxazin-10-yl)ethyl methanesulfonate
IN Batchu, Chandrasekhar; Mamillapalli, Ramabhadra Sarma; Gaddam, Om Reddy
PA Reddy's Research Foundation, India
SO PCT Int. Appl., 13 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2002034733	A1	20020502	WO 2000-IB1556	20001026
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 2000079388	A5	20020506	AU 2000-79388	20001026
PRAI WO 2000-IB1556	A	20001026		

OS CASREACT 136:340686; MARPAT 136:340686
AB 2-(Phenoxazin-10-yl)ethyl methanesulfonate (m.p. 81-82.degree.) is prepd.
in high yield and selectivity without the need to use expensive reagents by N-(2-hydroxyethylating) 10H-phenoxazine with a 2-haloethanol (e.g., 2-bromoethanol) to give 2-(phenoxazin-10-yl)ethanol and mesylating the 2-(phenoxazin-10-yl)ethanol with methanesulfonyl chloride in the presence
of an org. base (e.g., triethylamine) and an org. solvent (e.g., Et acetate).
IT **222835-09-8P**
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(improved process for the prepn. of 2-(phenoxazin-10-yl)ethyl methanesulfonate)
RN 222835-09-8 CAPLUS
CN 10H-Phenoxazine-10-ethanol, methanesulfonate (ester) (9CI) (CA INDEX NAME)



RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

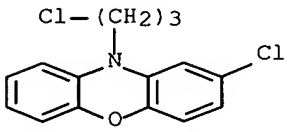
L4 ANSWER 6 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 2002:100011 CAPLUS
DN 136:349877
TI Electrochemical and spectral analysis of oxidized products of 10-[3'-bis(hydroxyethyl)aminopropyl]-2-chlorophenoxazine redox indicator
AU Channu, B. C.; Chandramouli, K. H.; Hegde, Ravi; Vadiraj, S. G.; Mayur, Y. C.; Thimmaiah, K. N.
CS Department of Studies in Chemistry, University of Mysore, Mysore, 570 006, India
SO Asian Journal of Chemistry (2002), 14(1), 1-15
CODEN: AJCHEW; ISSN: 0970-7077
PB Asian Journal of Chemistry
DT Journal
LA English
AB 10-(3'-Chloropropyl)-2-chlorophenoxazine was obtained by N10-alkylation of 2-chlorophenoxazine with 1-bromo-3-chloropropane via phase transfer catalysis. Nucleophilic substitution of N10-Pr chloride with N,N-diethanolamine gave 10-[3'-bis(hydroxyethyl)aminopropyl]-2-chlorophenoxazine [BPCP], which was characterized by UV, IR, 1H- and 13C-NMR and mass spectral anal. Cerium(IV) sulfate oxidized BPCP reversibly to a pink colored radical cation [BPCP+.cntdot.] in the presence of stoichiometric amts. (BPCP: Ce(IV) = 1: 1) of the reactants. The radical cation undergoes a 2nd 1-electron oxidn. to form a brownish yellow colored dication [BPCP2+] in the presence of more than one equiv. of Ce(IV), which was identified by UV-visible, IR and mass-spectral methods. The cyclic voltammogram of BPCP exhibited two anodic waves at 640 mV and 1057 mV and two cathodic waves at 582 mV and 930 mV at a scan rate of 24 mV/s. The peak at 640 mV corresponds to the oxidn. of BPCP to the radical cation [BPCP+.cntdot.] and 2nd anodic peak at 1057 mV stands for oxidn. of radical cation to dication [BPCP2+]. Other cyclic voltammetric parameters such as Ep01 and Ep02 (anodic peak potentials), Epr1 and Epr2 (cathodic peak potentials), Ef1 and Ef2 (formal redox potentials), ip01 and ip02 (anodic peak currents), ipr1 and ipr2 (cathodic peak currents) and D11/2 and D21/2 (diffusion coeffs.) were detd. Bromine, which is liberated due to oxidn. of potassium bromide with bromamine-T (BAT) in acid medium, oxidizes BPCP to three products as evidenced by HPLC. The tentatively predicted structures based on the mass-spectral data support the formation of brominated oxidized products. The resp. 1st and 2nd formal potentials of BPCP are 782-771 mV and 936-842 mV and the transition potential of BPCP in the titrn. of ascorbic acid with BAT is 770 mV in 0.5M sulfuric acid. The optimum conditions for the successful use of BPCP as a redox indicator in the macro and micro detn. of ascorbic acid, methionine, isoniazid, phenylhydrazine hydrochloride and biotin using BAT as an oxidant were developed. The indicator gives sharp and stoichiometric end-points. The importance of this method was the use of BPCP as an indicator for oxidn.-redn. reactions for the volumetric

detn. of bioanalytically important species such as ascorbic acid, methionine and isoniazid in real samples.

IT **196205-53-5P**, 10-(3'-Chloropropyl)-2-chlorophenoxazine
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(in prepn. of 10-[3'-bis(hydroxyethyl)aminopropyl]-2-chlorophenoxazine
redox indicator)

RN 196205-53-5 CAPLUS

CN 10H-Phenoxazine, 2-chloro-10-(3-chloropropyl)- (9CI) (CA INDEX NAME)

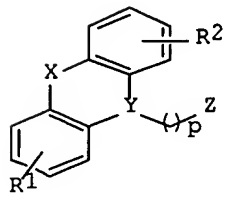


RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

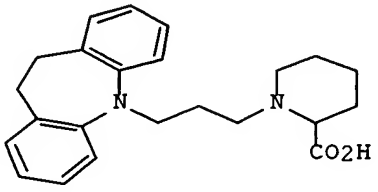
L4 ANSWER 7 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 2001:392066 CAPLUS
DN 135:5537
TI Synthesis and use of N-substituted dibenzazaheterocyclic carboxylic acids
and derivatives thereof for treatment of pain, hyperalgesia and inflammatory conditions
IN Dorwald, Florenzio Zaragossa; Andersen, Knud Erik; Hohlweg, Rolf; Madsen,
Peter; Jorgensen, Tine Krogh; Olsen, Uffe Bang; Andersen, Henrik Sune; Treppendahl, Svend; Zdenek, Polivka; Alexandra, Silhankova; Karel, Sindelar
PA Novo Nordisk A/S, Den.
SO U.S., 19 pp., Cont.-in-part of U.S. 5,874,428.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6239148	B1	20010529	US 1998-55574	19980406
	US 5595989	A	19970121	US 1995-367648	19950103
	ZA 9500031	A	19960704	ZA 1995-31	19950104
	US 5688788	A	19971118	US 1995-444140	19950518
	US 5693649	A	19971202	US 1995-544502	19951018
	US 5712292	A	19980127	US 1995-544905	19951018
	US 5721254	A	19980228	US 1995-544500	19951018
	US 5795888	A	19980818	US 1995-544682	19951018
	US 5668129	A	19970916	US 1996-626745	19960327
	US 5874428	A	19990223	US 1996-623289	19960328
	ZA 9602732	A	19961024	ZA 1996-2732	19960404
	US 6043239	A	20000328	US 1998-12918	19980123
	US 6613791	B1	20030902	US 2000-640605	20000817
PRAI	DK 1994-19	A	19940104		
	DK 1994-1290	A	19941109		
	US 1995-367648	A3	19950103		
	DK 1995-405	A	19950407		
	DK 1995-1005	A	19950911		
	US 1995-544682	A2	19951018		
	US 1996-623289	A2	19960328		
	US 1998-55574	A3	19980406		

OS MARPAT 135:5537
GI



I



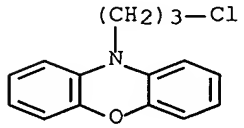
II

AB Compds. I are synthesized and used as analgesics [wherein; R1,R2 = H, halo, CF3, amino, OH, alkyl or alkoxy; Y = CH or C=CH-; X = (CH2)2, CH2-CO, CO CH2 or CH=CH; p = 1-3; Z = (partially unsatd.)(unsubstituted)piperidin-1-yl]. Twenty-seven synthetic examples were provided. Thus, 10,11-dihydro-5H-dibenz[b,f]azepine was N-acylated by ClCH2CH2COCl and the reduced product aminated by Et 2-piperidinecarboxylate HCl and base to give, after sapon., title compd. II. Compds. I inhibited a formalin-induced pain response in mice (hot plate test); e.g. II inhibited pain by 36% at a dose of 0.1 mg/kg. An exemplary tablet formulation (claimed 0.5 - 1000 mg a.i./unit dose) for compds. I is provided.

IT **92425-82-6P**, 10-(3-Chloropropyl)-10H-phenoxazine
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
RACT
(Reactant or reagent)
(synthesis and use of N-substituted dibenzazaheterocyclic carboxylic acids and derivs. thereof for treatment of pain, hyperalgesia and inflammatory conditions)

RN 92425-82-6 CAPLUS

CN 10H-Phenoxazine, 10-(3-chloropropyl)- (9CI) (CA INDEX NAME)

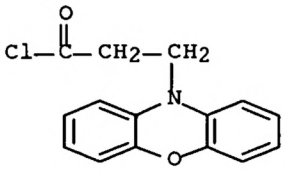


RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

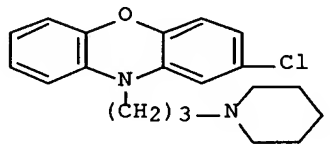
L4 ANSWER 8 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 2001:284236 CAPLUS
DN 134:318433
TI Electrochromic device
IN Fitzmaurice, Donald; Cummins, David; Corr, David; Rao, Nagaraja S.; Boschloo, Gerrit
PA University College Dublin, Ire.
SO PCT Int. Appl., 63 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001027690	A2	20010419	WO 2000-IE123	20001011
	WO 2001027690	A3	20011004		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	EP 1224505	A1	20020724	EP 2000-966383	20001011
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
	JP 2003511837	T2	20030325	JP 2001-530641	20001011
PRAI	IE 1999-846	A	19991011		
	WO 2000-IE123	W	20001011		

OS MARPAT 134:318433
AB Electrochromic device electrodes formed from nanoporous nanocryst. films are described in which the films comprise a conducting metal oxide on which is adsorbed an electroactive compd. which is either a p-type or n-type redox promoter or a p-type or n-type redox chromophore. The films and the electrodes are described sep. Methods for prepg. electrochromic devices are also described which entail providing conducting and, if appropriate, semiconducting nanostructured metal oxide films; modifying the resulting films, if appropriate, by chemisorption of an electroactive compd. of p- or n-type; applying the (modified) films to the internal face of the first and second electrodes; and adding an electrolyte so that it is disposed between the electrodes. Use of the devices in windows and displays is also described.
IT **334990-73-7P**, 10H-Phenoxazine-10-propanoyl chloride
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(electrochromic device electrodes formed from nanostructured metal oxide films bearing adsorbed compds. and the films and the devices and their fabrication)
RN 334990-73-7 CAPLUS
CN 10H-Phenoxazine-10-propanoyl chloride (9CI) (CA INDEX NAME)



L4 ANSWER 9 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 2000:780183 CAPLUS
DN 134:110095
TI Synthesis and analysis of structural features of phenoxazine analogues needed to reverse vinblastine resistance in multidrug resistant (MDR) cancer cells
AU Eregowda, G. B.; Kalpana, H. N.; Hegde, Ravi; Thimmaiah, K. N.
CS Department of Studies in Chemistry, University of Mysore, Mysore, 570 006, India
SO Indian Journal of Chemistry, Section B: Organic Chemistry Including Medicinal Chemistry (2000), 39B(4), 243-259
CODEN: IJSBDB; ISSN: 0376-4699
PB National Institute of Science Communication, CSIR
DT Journal
LA English
OS CASREACT 134:110095
GI



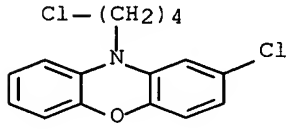
I

AB To find clin. useful modulators of multidrug resistance (MDR) twenty one 2-chloro-N10-substituted phenoxazines have been synthesized. The novel 2-chlorophenoxazine is prepd. by the pyrolytic condensation of 2-bromophenol and 2,5-dichloronitrobenzene. The lipophilicity expressed in log10P, and pKa of compds. have been detd. All the compds. have been examd. for their ability to increase the uptake of vinblastine (VLB) in MDR KBChR-8-5 cells and the results show that some of the compds. at 100 .mu.M concn. exhibit enhanced accumulation of VLB by 2.0-5.8-fold greater than a similar concn. of verapamil. However, the effects on VLB uptake are specific because these derivs. have little activity in the parental drug-sensitive line KB 3-1. The effect of these compds. on the cellular accumulation of VLB in low P-glycoprotein contg. MDR rhabdomyosarcoma cell line (Rh30) has also been examd. Most of the chlorophenoxazines at 100 .mu.M concn. enhance significantly the accumulation of VLB in Rh30 cells by 10.9-53-fold with respect to control. Substitution of hydrogen with chlorine in position C-2 of the phenoxazine ring increases the ability to enhance the uptake of VLB in KBChR-8-5 cells by 1.15-19.7-fold. The effect of these compds. on the efflux of VLB from KBChR-8-5 cells has been examd. and the results show that most of these compds. significantly inhibit the efflux of VLB consistent with being competitors for P-glycoprotein. Efflux of VLB from Rh30 cells in the presence of 100 .mu.M of some compds. result in 43-65% of the accumulated VLB being retained at 2 h, suggesting that the phenoxazines have relatively little effect on VLB efflux from Rh30 cells. Efflux data in KBChR-8-5 and Rh30 cells suggest that 2-chlorophenoxazines may act through both P-glycoprotein mediated and independent mechanisms. Cytotoxicity has been detd. and the IC50 values lie in the range 3.2-42.1.mu.M for N10-chloropropyl, 2.7-16.7 .mu.M for N10-chlorobutyl and 51.6-68.6 .mu.M

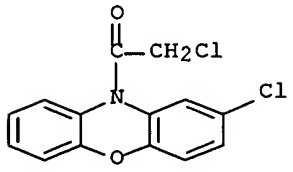
for N10-chloroacetyl derivs. against KBChR-8-5 cells suggesting that the antiproliferative activity decreases in the order: - Bu > - Pr > - acetyl analogs. Further, substitution of hydrogen by chlorine in C-2 of phenoxazine ring causes a greater enhancement in the antiproliferative potency by 1.1-2.6-fold for KBChR-8-5 cells than their resp. counterparts, presumably due to increased hydrophobicity. Compds. at IC10 have been evaluated for their efficacy to modulate the cytotoxicity of VLB in KBChR-8-5 cells and compd. I exhibits the greatest MDR reversal effect (136-fold). The structural features for reversal of MDR seem to include a hydrophobic phenoxazine ring with a -Cl group in the C-2 position and a tertiary amino group at a distance of three or four carbon chain from the tricyclic ring. Examn. of the relation between partition coeff. and cytotoxicity or anti-MDR activity shows no correlation suggesting that lipophilicity is not the sole determinant of potency for biol. activity.

IT **201789-01-7P 201789-02-8P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)
(synthesis and anal. of structural features of phenoxazine analogs needed to reverse vinblastine resistance in multidrug resistant (MDR) cancer cells)

RN 201789-01-7 CAPLUS
CN 10H-Phenoxazine, 2-chloro-10-(4-chlorobutyl)- (9CI) (CA INDEX NAME)



RN 201789-02-8 CAPLUS
CN 10H-Phenoxazine, 2-chloro-10-(chloroacetyl)- (9CI) (CA INDEX NAME)

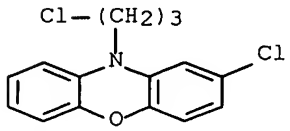


IT **196205-53-5P**, 10-(3'-Chloropropyl)-2-chlorophenoxazine
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)

(synthesis and anal. of structural features of phenoxazine analogs needed to reverse vinblastine resistance in multidrug resistant (MDR) cancer cells)

RN 196205-53-5 CAPLUS

CN 10H-Phenoxazine, 2-chloro-10-(3-chloropropyl)- (9CI) (CA INDEX NAME)



RE.CNT 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 10 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 2000:756688 CAPLUS
DN 133:310138
TI Preparation of crystalline R-guanidines, arginine or L-arginine (2S)-2-ethoxy-3-[4-[2-(10H-phenoxazin-10-yl)ethoxy]phenyl]propanoate
IN Ebdrup, Soren; Lugstein, Petra Christine
PA Novo Nordisk A/S, Den.; Reddy's Research Foundation
SO PCT Int. Appl., 34 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 5

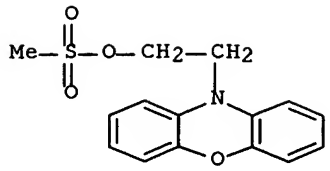
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2000063189	A1	20001026	WO 2000-DK188	20000417
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
WO 2000063191	A1	20001026	WO 1999-IB681	19990416
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				

PRAI WO 1999-IB681 W 19990416
DK 1999-536 A 19990420

AB The present invention relates to the prepn. of cryst. R-guanidines [R = (un)substituted alkyl, alkenyl, alkynyl], preferably L-arginine, of (2S)-2-ethoxy-3-[4-[2-(10H-phenoxazin-10-yl)ethoxy]phenyl]propanoate (I) for use as therapeutic agents, e.g., in the treatment and/or prevention of diabetes and/or obesity. Thus, I was prepd. via condensation of 2-(10H-phenoxazin-10-yl)ethyl methanesulfonate with Et (2R/2S)-2-ethoxy-3-(4-hydroxyphenyl)propanoate and reacted with L-arginine to form cryst. I.L-arginine.

IT **222835-09-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT(Reactant or reagent)(prepn. of cryst. arginine ethoxy[[(phenoxazinyl)ethoxy]phenyl]propanoate)

RN 222835-09-8 CAPLUS
CN 10H-Phenoxazine-10-ethanol, methanesulfonate (ester) (9CI) (CA INDEX NAME)

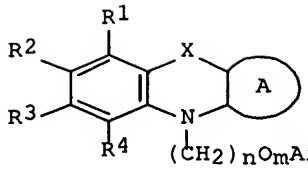


RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 11 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 2000:608739 CAPLUS
DN 133:193155
TI Preparation of .beta.-aryl-.alpha.-oxy substituted alkylcarboxylic acids as hypolipidemic, antihyperglycemic, antiobesity, and hypocholesterolemic agents
IN Lohray, Braj Bhushan; Lohray, Vidya Bhushan; Ashok, Channaveerappa Bajji; Shivaramayya, Kalchar; Paraselli, Bheema Rao; Gurram, Ranga Madhavan; Rajagopalan, Ramanujam; Rajan, Chakrabarti
PA Dr.Reddy's Research Foundation, India
SO PCT Int. Appl., 116 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000050414	A1	20000831	WO 1999-IB683	19990416
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	GB 2380997	A1	20030423	GB 2002-30280	19980123
	GB 2380997	B2	20030702		
	US 6440961	B1	20020827	US 1999-257104	19990224
	AU 9929537	A1	20000914	AU 1999-29537	19990416
	EP 1155006	A1	20011121	EP 1999-910638	19990416
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	BR 9917155	A	20020423	BR 1999-17155	19990416
	JP 2002537390	T2	20021105	JP 2000-600997	19990416
	EE 200100446	A	20021216	EE 2001-446	19990416
	HR 2001000612	A1	20021231	HR 2001-612	20010822
	NO 2001004102	A	20011024	NO 2001-4102	20010823
	BG 105925	A	20020628	BG 2001-105925	20010920
PRAI	US 1999-257104	A	19990224		
	IN 1997-MA2416	A	19971027		
	GB 2000-10176	A	19980123		
	US 1998-12585	A2	19980123		
	WO 1999-IB683	W	19990416		

OS MARPAT 133:193155
GI



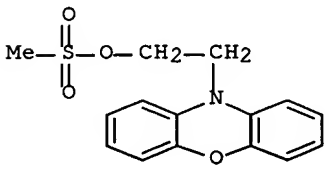
I

AB .beta.-Aryl-.alpha.-oxy substituted alkylcarboxylic acids I [R1-R4 = H, halo, OH, NO2, etc.; ring A = 5-6 membered cyclic structure contg. C atoms and may contain O, S, N; X = O, S, NR9; Ar = arom. or heterocyclic group; R5 = H, LH, alkoxy, etc.; R6 = H, OH, halo, etc.; R7 = H, alkyl, aryl, etc.; R8 = H, alkyl, cycloalkyl, etc.; Y = O, NR10; n = 1-4; m = 0, 1], hypolipidemic, antihyperglycemic, antiobesity and hypocholesterolemic agents, were prepd. E.g.,3-[4-[2-(phenoxazin-10-yl)ethoxy]phenyl]-2-hydroxypropanoic acid was prepd.

IT **222835-09-8**
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of .beta.-aryl-.alpha.-oxy substituted alkylcarboxylic acids as hypolipidemic, antihyperglycemic, antiobesity, and hypocholesterolemic agents)

RN 222835-09-8 CAPLUS

CN 10H-Phenoxazine-10-ethanol, methanesulfonate (ester) (9CI) (CA INDEX NAME)

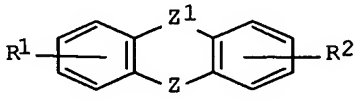


RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

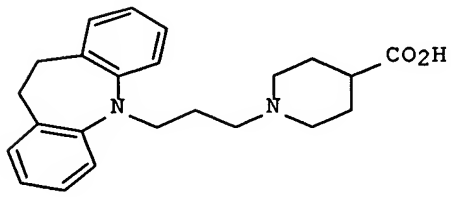
L4 ANSWER 12 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 2000:606859 CAPLUS
DN 133:193091
TI Preparation of 1-(dibenzazepinoalkyl)azacycloalkanecarboxylic acids and analogs as CGRP inhibitors
IN Dorwald, Florenzio Zaragossa; Andersen, Knud Erik; Hohlweg, Rolf; Madsen, Peter; Joslashedrgensen, Tine Krogh; Olsen, Uffe Bang; Andersen, Henrik Sune; Treppendahl, Svend; Zdenek, Polivka; Karel, Sindelar; Alexandra, Silhankova
PA Novo Nordisk A/S, Den.
SO U.S., 21 pp., Cont.-in-part of U.S. 5,874,428.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6110913	A	20000829	US 1998-55633	19980406
	US 5595989	A	19970121	US 1995-367648	19950103
	ZA 9500031	A	19960704	ZA 1995-31	19950104
	US 5688788	A	19971118	US 1995-444140	19950518
	US 5693649	A	19971202	US 1995-544502	19951018
	US 5712292	A	19980127	US 1995-544905	19951018
	US 5721254	A	19980228	US 1995-544500	19951018
	US 5795888	A	19980818	US 1995-544682	19951018
	US 5668129	A	19970916	US 1996-626745	19960327
	US 5874428	A	19990223	US 1996-623289	19960328
	ZA 9602732	A	19961024	ZA 1996-2732	19960404
	US 6043239	A	20000328	US 1998-12918	19980123
	US 6166009	A	20001226	US 1999-390020	19990903
PRAI	DK 1994-19	A	19940104		
	DK 1994-1290	A	19941109		
	US 1995-367648	A3	19950103		
	DK 1995-405	A	19950407		
	DK 1995-1005	A	19950911		
	US 1995-544682	A2	19951018		
	US 1996-623289	A2	19960328		
	US 1998-55633	A3	19980406		

OS MARPAT 133:193091
GI



I



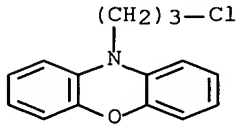
II

AB Title compds. [I; R1,R2 = H, halo, alkyl, alkoxy, etc.; Z =

N[(CH2)nR]CH2,
CH[(CH2)nR]CH2, C:CH; R = Z2R3; R3 = (CH2)mOH or (CH2)pCOR4; R4 = OH, NH2,
NHOH, alkoxy; Z1 = O, S, CH2CH2,CH:CHCH2, CH2CO, etc.; Z2 = pyrrolidine-1,2-diyl, piperidine-1,3- or -1,4-diyl, tetrahydroquinoline-2,3-diyl, etc.; m = 0-6; n = 1-3; p = 0 or 1] were prepd. Thus, 10,11-dihydro-5H-dibenz[b,f]azepine was N-acylated by ClCH2CH2COCl and the
reduced product aminated by Et 4-piperidinecarboxylate to give, after sapon., title compd. II. Data for biol. activity of I were given.

IT **92425-82-6P**, 10-(3-Chloropropyl)-10H-phenoxazine
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(prepn. of 1-(dibenzazepinoalkyl)azacycloalkanecarboxylic acids and analogs as CGRP inhibitors)

RN 92425-82-6 CAPLUS
CN 10H-Phenoxazine, 10-(3-chloropropyl)- (9CI) (CA INDEX NAME)

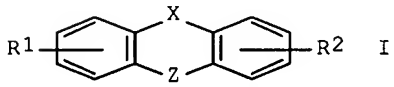


RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 13 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 2000:378163 CAPLUS
DN 133:17390
TI Preparation of N-[carboxypiperidino)alkyl](dibenz[b,f]azepines and analogs for treatment of neurogenic inflammation and insulin resistance
IN Dorwald, Florenzio Zaragossa; Andersen, Knud Erik; Hohlweg, Rolf; Madsen, Peter; Joslashedrgensen, Tine Krogh; Olsen, Uffe Bang; Andersen, Henrik Sune; Treppendahl, Svend; Zdenek, Polivka; Alexandra, Silhankova; Karel, Sindelar
PA Novo Nordisk A/S, Den.
SO U.S., 20 pp., Cont.-in-part of U.S. Ser. No. 623,289.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6071901	A	20000606	US 1998-53339	19980401
	US 5595989	A	19970121	US 1995-367648	19950103
	ZA 9500031	A	19960704	ZA 1995-31	19950104
	US 5688788	A	19971118	US 1995-444140	19950518
	US 5693649	A	19971202	US 1995-544502	19951018
	US 5712292	A	19980127	US 1995-544905	19951018
	US 5721254	A	19980228	US 1995-544500	19951018
	US 5795888	A	19980818	US 1995-544682	19951018
	US 5668129	A	19970916	US 1996-626745	19960327
	US 5874428	A	19990223	US 1996-623289	19960328
	ZA 9602732	A	19961024	ZA 1996-2732	19960404
	US 6043239	A	20000328	US 1998-12918	19980123
PRAI	DK 1994-19	A	19940104		
	DK 1994-1290	A	19941109		
	US 1995-367648	A3	19950103		
	DK 1995-405	A	19950407		
	DK 1995-1005	A	19950911		
	US 1995-544682	A2	19951018		
	US 1996-623289	A2	19960328		

OS MARPAT 133:17390
GI



I

AB Title compds. [I; R1,R2 = H, halo, alkyl, alkoxy, etc.; X = O, S, CH2CH2, CH2CO, NHCO, etc.; Z = N(CH2)rZ1R3, CH(CH2)rZ1R3, C:CH(1h)rZ1R3, etc.; R3 = (CH2)mOH or (CH2)pCOR4; R4 = OH, NH2, NHOH, alkoxy; Z1 = pyrrolidine-1,2-diyl, piperidine-1,n-diyl, morpholine-4,2-diyl, piperazine-1,4-diylmethyl, etc.; m = 0-6; n = 2-4; p = 0 or 1; r = 1-3] were prepd. Thus, I (R1 = R2 = H, X = CH2CH2, Z = NR)(II; R = H) was N-acylated by ClCH2CH2COCl and the reduced product aminated by Et

piperidine-4-carboxylate to give, after sapon., II [R = 3-(4-carboxypiperidino)propyl]. Data for biol. activity of I were given.

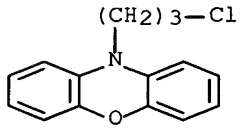
IT **92425-82-6P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. of N-[carboxypiperidino)alkyl](dibenz[b,f]azepines and analogs for treatment of neurogenic inflammation and neurogenic inflammation)

RN 92425-82-6 CAPLUS

CN 10H-Phenoxazine, 10-(3-chloropropyl)- (9CI) (CA INDEX NAME)



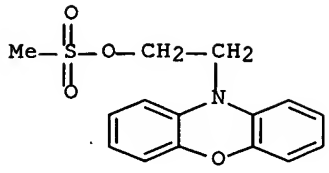
RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 14 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 2000:314685 CAPLUS
DN 132:334467
TI Preparation of 4-[2-(phenoxazin-10-yl)ethoxy]phenyllactates
IN Siripragada, Mahender Rao; Chebiyyam, Prabhakar; Potlapally, Rajendra Kumar; Batchu, Chandra Sekhar; Mamillapally, Ramabhadra Sarma; Gaddam, Om Reddy
PA Reddy's Research Foundation, India
SO PCT Int. Appl., 98 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000026200	A1	20000511	WO 1999-IB684	19990416
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	AU 9929538	A1	20000522	AU 1999-29538	19990416
	AU 763087	B2	20030710		
	BR 9914438	A	20010626	BR 1999-14438	19990416
	EP 1124808	A1	20010822	EP 1999-910639	19990416
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 2002528535	T2	20020903	JP 2000-579589	19990416
	NZ 510904	A	20030829	NZ 1999-510904	19990416
	ZA 2001002338	A	20020620	ZA 2001-2338	20010320
	NO 2001001804	A	20010627	NO 2001-1804	20010409
	US 6531596	B1	20030311	US 2001-786599	20010530
	US 2003125553	A1	20030703	US 2002-325176	20021220
PRAI	IN 1998-MA2431	A	19981029		
	IN 1998-MA2432	A	19981029		
	IN 1998-MA2433	A	19981029		
	US 1999-127228P	P	19990331		
	WO 1999-IB684	W	19990416		
	US 2001-786599	A3	20010530		

OS CASREACT 132:334467; MARPAT 132:334467
AB (S)-3,4-R2R3C6H3CH2CH(OR1)CO2H [R3 = 2-(phenoxazin-10-yl)ethoxy](I; R1 = H or alkyl; R2 = H or halo) were prepd. Thus, e.g., Et 2,3-epoxy-3-(4-benzyloxyphenyl)propionate (prepn. given) was condensed with ClCH2CO2Et and the sapond. and resolved product converted in 2 steps to (S)-(-)-4-HOC6H4CH2CH(OEt)CO2Et was etherified by RCH2CH2OSO2Me (R = 10-phenoxazinyl) to give, after sapon., (S)-(-)-I (R1 = Et, R2 = H).
IT **222835-09-8**
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of 4-[2-(phenoxazin-10-yl)ethoxy]phenyllactates)
RN 222835-09-8 CAPLUS
CN 10H-Phenoxazine-10-ethanol, methanesulfonate (ester) (9CI) (CA INDEX

NAME)



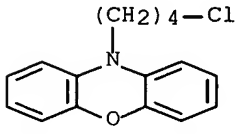
RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 15 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 2000:286680 CAPLUS
DN 133:17106
TI Structural studies of some phenoxazine derivatives
AU Sridhar, M. A.; Ramegowda, M.; Lokanath, N. K.; Prasad, J. Shashidhara; Gowda, G. B. Ere; Thimmaiah, K. N.
CS Department of Studies in Physics, University of Mysore, Mysore, 570 006, India
SO Molecular Crystals and Liquid Crystals Science and Technology, Section A:
Molecular Crystals and Liquid Crystals (1999), 326, 189-214
CODEN: MCLCE9; ISSN: 1058-725X
PB Gordon & Breach Science Publishers
DT Journal
LA English
AB The compd. 10-(4'-chlorobutyl)phenoxazine (A), crystallizes in the triclinic space group P1 with a = 11.664(2).ANG., b = 12.6292(2).ANG., c = 10.5832(14).ANG., .alpha. = 113.041(9).degree., .beta. = 99.543(11).degree., .gamma. = 83.340(10).degree., V = 1412.5(3).ANG.3 and Z = 2. The structure is refined to R = 0.102. There are two mols. in the asym. unit. The packing of the mols. shows stacking along all the three axes. When viewed down, b, the two mols. of the asym. unit appear almost perpendicular to each other. The compd., 10-(3'-N-Pyrrolidinopropyl)-2-(trifluoromethyl)phenoxazine hydrochloride (B), crystallizes in the monoclinic space group C2/c with a = 25.046(13).ANG., b = 11.638(6).ANG., c = 14.384(28 .ANG.), .beta. = 107.25(8).degree., V = 4003(2).ANG.3 and Z = 8. The structure is refined to R = 0.065, the packing of the mols. shows stacking when viewed down b axis. The compd., 10-(N-morpholinoacetyl)-2-(trifluoromethyl)phenoxazine (C), crystallizes in the monoclinic space group P21/n with a = 12.710(4).ANG., b = 8.5163(14).ANG., c = 17.157(4).ANG., .beta. = 108.62(2).degree., V = 1759.9(7).ANG.3 and Z = 4. The structure is refined to R = 0.041. The packing of the mols. shows layered arrangement when viewed along b. The compd., 10-(N-chloroacetyl)-2-(trifluoromethyl)phenoxazine (D), crystallizes in the monoclinic space group P21/a with a = 8.888(2).ANG., b = 10.870(1).ANG., c = 14.544(2).ANG., .beta. = 102.48(2).degree., V = 1372(4).ANG.3 and Z = 2. The structure is refined to R = 0.089. Intra and intermol. hydrogen bonds are obsd. in the structure. The compd., 10-(N-piperidinoacetyl)phenoxazine (E), crystallizes in the monoclinic space group P21/a with a = 12.314(4).ANG., b = 9.108(3).ANG., c = 14.586(4).ANG., .beta. = 106.26(2).degree., V = 1621.4(8).ANG.3 and Z = 4. The structure is refined to R = 0.08. Packing of mols. shows stacking in two layers when viewed along b. One layer has the three fused rings and other layer has the cyclohexane ring.
IT **142744-98-7 154784-64-2**
RL: PRP (Properties)

(crystallog. of)

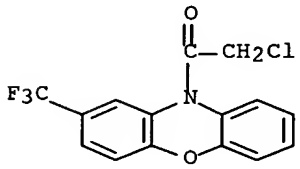
RN 142744-98-7 CAPLUS

CN 10H-Phenoxazine, 10-(4-chlorobutyl)- (9CI) (CA INDEX NAME)



RN 154784-64-2 CAPLUS

CN 10H-Phenoxazine, 10-(chloroacetyl)-2-(trifluoromethyl)- (9CI) (CA INDEX NAME)

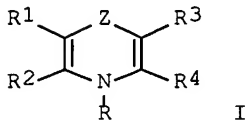


RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 16 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 2000:271933 CAPLUS
DN 132:293769
TI Preparation of 4-(phenothiazinoalkoxy)phenylpropanoates and analogs as peroxisome proliferator-activated receptor agonists
IN Lohray, Braj Bhushan; Lohray, Vidya Bhushan; Bajji, Ashok Channaveerappa; Kalchar, Shivaramayya; Ramanujam, Rajagopalan; Chakrabarti, Ranjan
PA Redd's Research Foundation, India; Reddy-Cheminor, Inc.
SO U.S., 30 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6054453	A	20000425	US 1998-12585	19980123
	GB 2380997	A1	20030423	GB 2002-30280	19980123
	GB 2380997	B2	20030702		
	US 6440961	B1	20020827	US 1999-257104	19990224
	US 6548666	B1	20030415	US 2001-853176	20010510
	US 6608194	B1	20030819	US 2001-853177	20010510
	US 2002077320	A1	20020620	US 2001-7109	20011206
PRAI	IN 1997-MA2416	A	19971027		
	GB 2000-10176	A	19980123		
	US 1998-12585	A2	19980123		
	US 1999-257104	A3	19990224		
	US 1999-448260	A3	19991123		

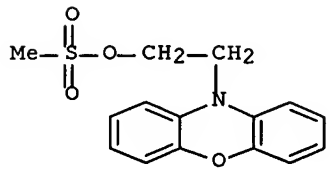
OS MARPAT 132:293769
GI



I

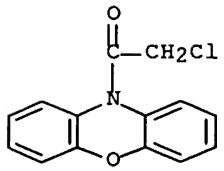
AB Title compds. [I; R = (CH2)nOmZ1CHR5CR6(OR7)COYR8; R1R2 = (un)substituted CH:CHCH:CH; R3R4 = atoms to complete a ring; R5 = H, halo, alkyl, alkoxy, etc.; R6 = H, halo, alkyl, acyl, etc.; R5R6 = bond; R7 = H, alkyl, (hetero)aryl, etc.; Y = O or NR10; R10 = H, (ar)alkyl, aryl, etc.; Z = O, S, NR9; R9 = H, (ar)alkyl, aryl, acyl, etc.; Z1 = arylene, heterocyclylene; m = 0 or 1; n = 1-4] were prepd. Thus, phenoxazine was N-alkylated by 4-(BrCH2CH2O)C6H4CH2CH(OEt)CO2Et (prepn. given) to give I [R = CH2CH2OC6H4[CH2CH(OEt)CO2Et]-4, R1R2,R3R4 = CH:CHCH:CH]. Data for biol. activity of I were given.
IT **222835-09-8**
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of 4-(phenothiazinoalkoxy)phenylpropanoates and analogs as peroxisome proliferator-activated receptor agonists)
RN 222835-09-8 CAPLUS

CN 10H-Phenoxazine-10-ethanol, methanesulfonate (ester) (9CI) (CA INDEX NAME)

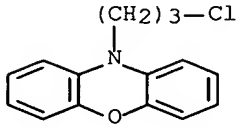


RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 17 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1999:669501 CAPLUS
DN 132:160896
TI Effect of phenoxazine MDR modulators on photoaffinity labeling of P-glycoprotein by [3H] azidopine: an approach to understand drug resistance in cancer chemotherapy
AU Kalpana, H. N.; Eregowda, G. B.; Jagadeesh, S.; Thimmaiah, K. N.
CS Department of Studies in Chemistry, University of Mysore, Mysore, 570 006, India
SO Indian Journal of Pharmaceutical Sciences (1999), 61(3), 168-174
CODEN: IJSIDW; ISSN: 0250-474X
PB Indian Pharmaceutical Association
DT Journal
LA English
AB Previously, a series of 21 N10-substituted phenoxazines were examd. for reversing vinca alkaloid resistance against MDR KBChR-8-5 and GC3/cl cells. Within the series, there are compds. that inhibit efflux (verapamil-like activity), whereas others markedly increased vinca alkaloid accumulation without having detectable inhibitory activity of the efflux component. It has been shown that MDR modulators that inhibit photoaffinity labeling of P-glycoprotein (P-gp) were generally the most potent MDR reversers. To show whether this observation is true, P-gp rich membrane fractions from KB-V1 cells were isolated and the interaction of [3H] azidopine with membrane fractions in the presence of 25, 50 and 100 .mu.M concn. of each of the twenty N10-substituted phenoxazines was undertaken and the extent of competition was compared to a std. modulator, verapamil. Examn. of the competition data showed that only two modulators exhibited the max. competition (>50%) and the remaining modulators were found to exhibit the inhibition of the photolabeling by less than 45%. However, 3 modulators failed to compete for azidopine labeling. Within the series of compds. examd., the competition of phenoxazines for [3H] azidopine binding to P-gp follows the order: Pr > Bu > acetyl series. It has been found that, from among the compds. examd., three of them interact strongly (>50%), six marginally (<45%) and remaining failed to interact with P-gp, indicating that there may be multiple mechanisms for MDR.
IT **43170-47-4 92425-82-6**, 10-(3'-Chloropropyl)phenoxazine
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES
(Uses)
(effect of phenoxazine MDR modulators on photoaffinity labeling of p-glycoprotein by [3H] azidopine as approach to understand drug resistance in cancer chemotherapy and its reversal)
RN 43170-47-4 CAPLUS
CN 10H-Phenoxazine, 10-(chloroacetyl)- (9CI) (CA INDEX NAME)

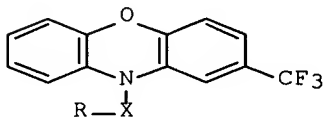


RN 92425-82-6 CAPLUS
CN 10H-Phenoxazine, 10-(3-chloropropyl)- (9CI) (CA INDEX NAME)

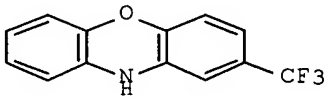


RE.CNT 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 18 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1999:466564 CAPLUS
DN 131:228693
TI Structural requirements for activity of phenoxazines for reversal of drug resistance in cancer cells
AU Eregowda, G. B.; Krishnegowda, G.; Kalpana, H. N.; Channu, B. C.; Dass, C.; Horton, J. K.; Houghton, P. J.; Thimmaiah, K. N.
CS Department of Studies in Chemistry, University of Mysore, Mysore, 570 006, India
SO Asian Journal of Chemistry (1999), 11(3), 878-905
CODEN: AJCHEW; ISSN: 0970-7077
PB Asian Journal of Chemistry
DT Journal
LA English
GI



I



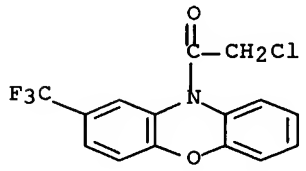
II

AB In the course of a chem. program aimed at identifying chem. useful modulators of MDR in cancer therapy, a series of trifluoromethyl substituted phenoxazines I [R = Et2N, (HOCH2CH2)2N, 4-morpholinyl, 1-piperidinyl, 1-pyrrolidinyl, 4-(2-hydroxyethyl)piperidinyl, Cl; X = (CH2)3, (CH2)4, CH2CO] was prepd. Trifluoromethylphenoxazine II was prepd. by the condensation of 2-bromophenol and 4-chloro-3-nitrobenzotrifluoride in formic acid at 140-160.degree.; II then undergoes N-alkylation under phase transfer conditions with chloroacetyl chloride, 1-bromo-3-chloropropane, or 1-chloro-4-bromobutane to give chloroalkyl intermediates which undergo substitution reactions with amines to give I. II is stirred with 1-bromo-3-chloropropane or 1-bromo-4-chlorobutane in a two phase system of benzene and 6N aq. potassium hydroxide in the presence of tetrabutylammonium bromide to give the intermediates I [X = (CH2)3, (CH2)4; R = Cl] in good yield. Iodide-catalyzed nucleophilic substitution reactions of I [X = (CH2)3, (CH2)4, CH2CO; R = Cl] with secondary amines such as N,N-diethylamine, N,N-diethanolamine, morpholine, piperidine, pyrrolidine and (.beta.-hydroxyethyl)-piperazine yielded the title phenoxazines I. The lipophilicity (as expressed in log10 P) and the pKa of I [R = Et2N, (HOCH2CH2)2N, 4-morpholinyl, 1-piperidinyl, 1-pyrrolidinyl, 4-(2-hydroxyethyl)piperidinyl, Cl; X = (CH2)3, (CH2)4, CH2CO] were detd. The effect of I at 100 .mu.M on the steady-state accumulation of vinblastine (VLB) was studied in KBChR-8-5 cells and the data revealed that phenoxazines I with a Bu linker and most of I contg.

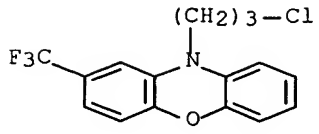
a
Pr linker exhibited a significant VLB uptake enhancing effect (8.3-58.5-fold relative to control) compared to a std. modulator, verapamil (VRP) (7.5-fold). These eleven compds. caused a 1.10-7.82-fold greater uptake of VLB than did a similar concn. of VRP. Comparison of the derivs. for their ability to potentiate the uptake of VLB revealed that they largely follow the order: N10-Pr > N10-Bu > N10-acetyl compds. To det. whether the increase in VLB uptake upon coincubation with I was due to a slowing of P-gp mediated efflux, KBChR-8-5 cells were loaded with [3H] VLB in the absence of modulator and efflux examd. in the absence or presence of 100 .mu.M of I [X = (CH2)4; R = 4-(2-hydroxyethyl)piperazinyl] or VRP. Less than 10% in the absence or about 40% of cell assocd. VLB in the presence of 100 .mu.M I [X = (CH2)4; R = 4-(2-hydroxyethyl)piperazinyl] remained at the end of a 2 h efflux period, suggesting that I [X = (CH2)4; R = 4-(2-hydroxyethyl)piperazinyl], like VRP, is able to inhibit p-glycoprotein (P-gp) mediated efflux. The cytotoxicities of I were detd. and the IC10 and IC50 values lie resp. in the range 0.1-30.9 .mu.M and 2.1-70.9 .mu.M for KBChR-8-5 cells. Substitution of phenoxazine derivs. with a trifluoromethyl group increases the MDR reversal more effective than other moieties. The partition coeff. and cytotoxicities of I show no correlation, indicating that the hydrophobicity of I is not the sole determinant of biol. activity.

IT **154784-64-2P 154784-65-3P 154784-66-4P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and cytotoxicity of aminoalkyltrifluoromethylphenoxazines as multidrug resistance reversing agents)

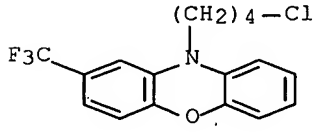
RN 154784-64-2 CAPLUS
CN 10H-Phenoxazine, 10-(chloroacetyl)-2-(trifluoromethyl)- (9CI) (CA INDEX NAME)



RN 154784-65-3 CAPLUS
CN 10H-Phenoxazine, 10-(3-chloropropyl)-2-(trifluoromethyl)- (9CI) (CA INDEX NAME)



RN 154784-66-4 CAPLUS
CN 10H-Phenoxazine, 10-(4-chlorobutyl)-2-(trifluoromethyl)- (9CI) (CA INDEX
NAME)

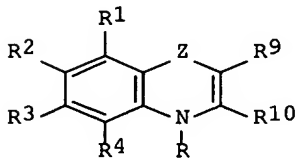


RE.CNT 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 19 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1999:271344 CAPLUS
DN 130:282078
TI Preparation of 2-alkoxy-3-arylalken- and -anoates and analogs as peroxisome proliferator-activated receptor agonists
IN Lohray, Braj Bhushan; Lohray, Vidya Bhushan; Bajji, Ashok Channaveerappa;
Kalchar, Shivaramayya; Ramanujam, Rajagopalan; Chakrabarti, Ranjan
PA Reddy's Research Foundation, India; Reddy-Cheminor, Inc.
SO PCT Int. Appl., 87 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9919313	A1	19990422	WO 1998-US1397	19980123
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	CA 2307820	AA	19990422	CA 1998-2307820	19980123
	AU 9860406	A1	19990503	AU 1998-60406	19980123
	AU 749505	B2	20020627		
	BR 9812772	A	20001010	BR 1998-12772	19980123
	EP 1049684	A1	20001108	EP 1998-903706	19980123
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 2001519422	T2	20011023	JP 2000-515886	19980123
	GB 2364304	A1	20020123	GB 2000-10176	19980123
	GB 2364304	B2	20030423		
	NZ 504104	A	20030328	NZ 1998-504104	19980123
	GB 2380997	A1	20030423	GB 2002-30280	19980123
	GB 2380997	B2	20030702		
	NO 2000002113	A	20000626	NO 2000-2113	20000426
PRAI	IN 1997-MA2416	A	19971027		
	GB 2000-10176	A	19980123		
	WO 1998-US1397	W	19980123		

OS MARPAT 130:282078
GI



I

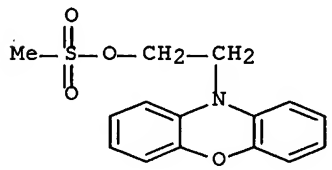
AB Title compds. [I; R = (CH2)nZ1Z2CHR5CR6(OR7)COYR8; R1-R4 = H, halo, alkyl, alkoxy, etc.; R5,R6 = H, halo, alkyl, alkoxy, etc.; R5R6 = bond; R7 = H, alkyl, aryl, etc.; R8 = H, alkyl, aryl, etc.; R9R10 = atoms to complete a (heterocyclic) ring; Y = O, (alkyl)imino, etc.; Z = O, S, (alkyl)imino, etc.; Z1 = bond or O; Z2 = heterocyclylene, arylene; n = 1-4] were prepd. Thus, [R = CH2CH2OC6H4(CHX)-4, R1-R4 = H, R9R10 = CH:CHCH:CH, Z = S](II; X = O) was condensed with (EtO)2P(O)CH(OEt)CO2Et to give II [X = C(OEt)CO2Et]. Data for biol. activity of I were given.

IT **222835-09-8**

RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of 2-alkoxy-3-arylalken- and -anoates and analogs as peroxisome proliferator-activated receptor agonists)

RN 222835-09-8 CAPLUS

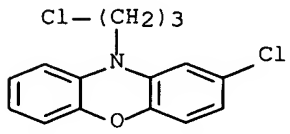
CN 10H-Phenoxazine-10-ethanol, methanesulfonate (ester) (9CI) (CA INDEX NAME)



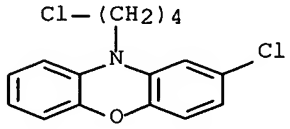
RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 20 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1998:341171 CAPLUS
DN 129:144642
TI Characterization of 2-chloro-N10-substituted phenoxazines for reversing multidrug resistance in cancer cells
AU Thimmaiah, Kuntebommanahalli N.; Jayashree, Bullur S.; Germain, Glen S.; Houghton, Peter J.; Horton, Julie K.
CS Department of Studies in Chemistry, University of Mysore, Mysore, 570006, India
SO Oncology Research (1998), 10(1), 29-41
CODEN: ONREE8; ISSN: 0965-0407
PB Cognizant Communication Corp.
DT Journal
LA English
AB Twenty-one 2-chloro-N10-substituted phenoxazines were characterized as potential modulators of multidrug resistance (MDR). Many of the compds., at a concn. of 100 .mu.M, enhanced accumulation of vinblastine (VLB) in drug-resistant KB8-5 cells to a greater extent than the same concn. of verapamil (VRP). However, the effects on VLB accumulation were specific, because these derivs. had little activity in the parental drug-sensitive line KB3-1. The compds. slowed the efflux of VLB from KB8-5 cells, suggesting that the chlorophenoxazines, like VRP, can inhibit P-glycoprotein (P-gp)-mediated efflux of VLB from this cell line. VRP, 2-chloro-10-[4-(4-morpholinyl)butyl]phenoxazine and 2-chloro-10-(1-piperidinylacetyl)phenoxazine were able to stimulate the vanadate-sensitive ATPase activity attributable to P-gp in membranes isolated from MDR1 baculovirus-infected Sf9 cells. Apparently, these modulators exert their effect by directly interacting with P-gp. Apart from the parent unsubstituted mol., 2-chlorophenoxazine, there was a good correlation between log10P and the ability of the compds. to enhance VLB accumulation in KB8-5. This suggests that lipophilicity of a modulator is important, but is not the sole determinant of potency. Within this series of compds., the optimal structural features for MDR modulation include a hydrophobic phenoxazine ring with a -Cl atom in the C-2 position and a tertiary amine group four carbons from the tricyclic ring. Many of the agents at the IC10 concn. completely reversed the 37-fold VLB resistance in KB8-5 cells. The most active agents in KB8-5 were able to partially reverse VLB resistance in an MDR colon carcinoma cell line GC3/cl and completely reversed the 86-fold VLB resistance in the MDR1-overexpressing breast carcinoma cell line BC19/3. These same agents could only partially sensitize BC19/3 cells to taxol and doxorubicin, suggesting that the chlorophenoxazine derivs. show some specificity for modulating VLB resistance.
IT **196205-53-5 201789-01-7 201789-02-8**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(2-chloro-N10-substituted phenoxazines for reversing multidrug resistance in cancer cells)

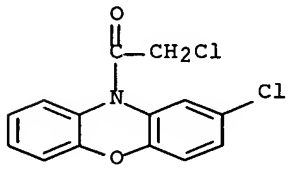
RN 196205-53-5 CAPLUS
CN 10H-Phenoxazine, 2-chloro-10-(3-chloropropyl)- (9CI) (CA INDEX NAME)



RN 201789-01-7 CAPLUS
CN 10H-Phenoxazine, 2-chloro-10-(4-chlorobutyl)- (9CI) (CA INDEX NAME)

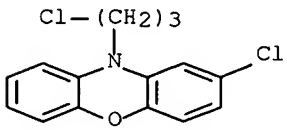


RN 201789-02-8 CAPLUS
CN 10H-Phenoxazine, 2-chloro-10-(chloroacetyl)- (9CI) (CA INDEX NAME)

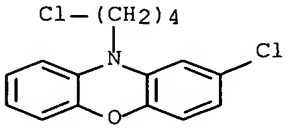


RE.CNT 49 THERE ARE 49 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 21 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1998:12083 CAPLUS
DN 128:114649
TI Liquid secondary ionization mass spectrometry and collision-induced dissociation study of 2-chloro-N10-substituted phenoxazines
AU Dass, Chhabil; Thimmaiah, K. N.; Jayashree, B. S.; Houghton, Peter J.
CS Department of Chemistry, University of Memphis, Memphis, TN, 38152, USA
SO Journal of Mass Spectrometry (1997), 32(12), 1279-1289
CODEN: JMSPFJ; ISSN: 1076-5174
PB John Wiley & Sons Ltd.
DT Journal
LA English
AB Pos.-ion liq. secondary-ionization mass spectrometry with 3-O2NC6H4CH2OH as the liq. matrix was used to study the mass-spectral features of a set of 21 N10-substituted derivs. of 2-chlorophenoxazine. The N-10 substitution included Pr, Bu and Ac groups contg. various secondary amines - [NEt2, N(CH2CH2OH)2, morpholino, piperidino, pyrrolidino or .beta.-(hydroxyethyl)piperazino] or a Cl group. These compds. are potent multidrug-resistance modulators. The mol. ions are obsd. as M+. and [M + H]+ ions. In general, the fragmentation pathways of these mols. are similar and very straightforward. The phenoxazine ring system remains stable under Cs+ ion-beam bombardment, while fragmentations are obsd. along the length of the alkyl and Ac side-chains. The fragmentation reactions were corroborated by acquiring product-ion and const.-neutral-loss tandem mass-spectrometric scans of the pertinent ions.
IT **196205-53-5 201789-01-7 201789-02-8**
RL: PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(liq. secondary-ionization mass spectrometry and collision-induced dissocn. of substituted chlorophenoxazines)
RN 196205-53-5 CAPLUS
CN 10H-Phenoxazine, 2-chloro-10-(3-chloropropyl)- (9CI) (CA INDEX NAME)

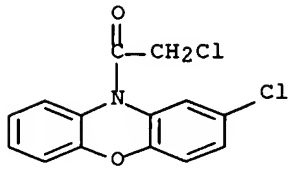


RN 201789-01-7 CAPLUS
CN 10H-Phenoxazine, 2-chloro-10-(4-chlorobutyl)- (9CI) (CA INDEX NAME)



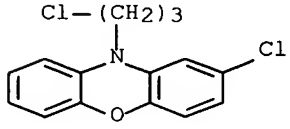
RN 201789-02-8 CAPLUS

CN 10H-Phenoxazine, 2-chloro-10-(chloroacetyl)- (9CI) (CA INDEX NAME)



RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

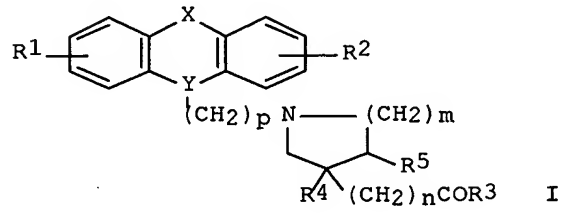
L4 ANSWER 22 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1997:610272 CAPLUS
DN 127:270747
TI Crystal structure of 10-(3'-chloropropyl)-2-chlorophenoxazine, (C6H4)ON(C6H3)Cl(C3H6)Cl
AU Ramegowda, M.; Lokanath, N. K.; Sridhar, M. A.; Shashidhara Prasad, J.; Eregowda, G. B.; Thimmaiah, K. N.
CS Government College Boys, Mandya, 571401, India
SO Zeitschrift fuer Kristallographie - New Crystal Structures (1997), 212(1), 23-24
CODEN: ZKNSFT; ISSN: 1433-7266
PB Oldenbourg
DT Journal
LA English
AB The title compd. is triclinic, space group P.hivin.1, a 9.518(2), b 10.471(2), c 7.865(1) .ANG., .alpha. 100.21(2), .beta. 106.26(2), .gamma. 65.04(1).degree., Z = 2, R = 0.038, Rw = 0.123 for 2399 reflections. At. coordinates are given. The bond distances and angles do not show any large deviations.
IT **196205-53-5**, 10-(3'-Chloropropyl)-2-chlorophenoxazine
RL: PRP (Properties)
(crystal structure of)
RN 196205-53-5 CAPLUS
CN 10H-Phenoxazine, 2-chloro-10-(3-chloropropyl)- (9CI) (CA INDEX NAME)



L4 ANSWER 23 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1997:501427 CAPLUS
DN 127:121639
TI Piperidinecarboxylic acid derivatives for reducing blood glucose levels
IN Olsen, Uffe Bang
PA Novo Nordisk A/S, Den.
SO PCT Int. Appl., 55 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9722338	A1	19970626	WO 1996-DK524	19961212
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	CA 2239487	AA	19970626	CA 1996-2239487	19961212
	AU 9711384	A1	19970714	AU 1997-11384	19961212
	AU 704825	B2	19990506		
	EP 869777	A1	19981014	EP 1996-942264	19961212
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	CN 1204258	A	19990106	CN 1996-199019	19961212
	BR 9612005	A	19990209	BR 1996-12005	19961212
	JP 3048067	B2	20000605	JP 1997-522429	19961212
	ZA 9610543	A	19980108	ZA 1996-10543	19961213
	US 5741791	A	19980421	US 1996-766839	19961213
	NO 9802732	A	19980814	NO 1998-2732	19980612
PRAI	DK 1995-1426	A	19951215		
	WO 1996-DK524	W	19961212		

OS MARPAT 127:121639
GI



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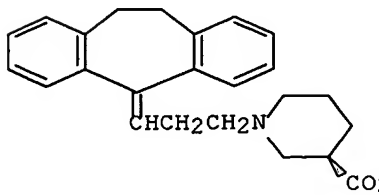
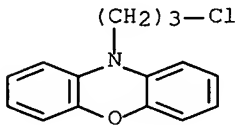


II

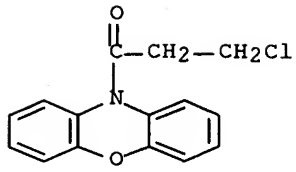
AB Title compds. I [R1, R2 = H, halogen, CF3, alkyl, alkoxy; R3 = OH, alkoxy;
R4, R5 = H, R4R5 = bond; X = O, S, (un)substituted CH2, CH2CH2, CH:CHCH2,
CH2CH:CH, (CH2)3, CH:CH, (un)substituted NHCO, OCH2, CO, CS; Y = NCH2, CHCH2, C:CH; m = n = 1; m = 2, n = 0; p = 1-3] were prepd. for use in reducing blood glucose and/or inhibiting the secretion, circulation or effect of insulin antagonizing peptides like CGRP or amylin. Thus, acid II was prepd. from 10,11-dihydro-5H-dibenzo[a,d]cyclohepten-5-one in 4 steps. II at 100 mg/L in drinking water lowered CGRP levels in mice from
260 to 152 pg/mL.

IT **92425-82-6P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(prepn. of piperidinecarboxylic acid derivs. for reducing blood glucose
levels)

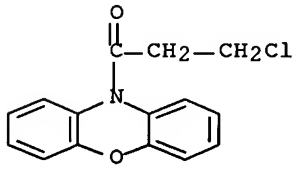
RN 92425-82-6 CAPLUS
CN 10H-Phenoxazine, 10-(3-chloropropyl)- (9CI) (CA INDEX NAME)



L4 ANSWER 24 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1997:414742 CAPLUS
DN 127:109265
TI Vinyl monomers bearing chromophore moieties and their polymers. VI. Synthesis and photochemical behavior of acrylic monomer bearing phenoxazine moiety and its polymer
AU Yu, Shu-Yan; Qiu, Jian; Li, Zi-Chen; Yao, Guang-Qing; Gao, Qing-Yu; Yang, Geng-Xu; Zhang, Ju-Xian; Li, Fu-Mian
CS Dep. Chem., peking Univ., Beijing, 100871, Peop. Rep. China
SO Journal of Applied Polymer Science (1997), 65(3), 481-489
CODEN: JAPNAB; ISSN: 0021-8995
PB Wiley
DT Journal
LA English
AB An acrylic monomer having phenoxazine moiety, i.e., N-acryloylphenoxazine (APO), was synthesized by dehydrochlorination of N-(3-chloropropionyl)phenoxazine with 1,5-diazabicyclo[5.4.0]undec-5-ene in DMSO. The monomer can be polymd. with AIBN as an initiator. The photochem. behavior, including the fluorescence and photosensitizing properties of this monomer and its polymer, has been studied. The absorption spectrum of polymer P(APO) displays a few blue shifts compared with its monomer APO. The fluorescence emission intensity of the monomer is dramatically lower than that of its polymer at the same chromophore concn. This may be ascribed to the charge transfer interacting between the coexisting electron-accepting acrylic carbon-carbon double bond and the electron donation phenoxazine moiety in APO, intramolecularly or intermolecularly on excitation. The fluorescence of the APO polymer, which does not have carbon-carbon double bond, can be quenched by electron-deficient unsatd. nitriles and esters, clarifying that the electron-deficient carbon-carbon double bond does play an important role for the fluorescence quenching of the monomer. Thus, we term such phenomena as structural self-quenching effect, differing from the concentrational self-quenching effect, which is caused mainly by concentrational factors. The fluorescence quenching effect, which is caused mainly by concentrational factors. The fluorescence quenching of P(APO) by C60 has also been demonstrated. The formation of the charge transfer complex of P(APO) with C60 in the ground state is revealed by the upward deviation from the linearity of the Stern-Volmer plot. APO can act as a photoinitiator to sensitize the photopolymn. of vinyl monomers such as acrylonitrile in DMF and pursued kinetically. From the UV anal. of the PAN sensitized by APO, it is proved that APO not only sensitizes the photopolymn. of AN, but also incorporates in the PAN chain.
IT **92433-61-9P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and dehydrochlorination of)
RN 92433-61-9 CAPLUS
CN 10H-Phenoxazine, 10-(3-chloro-1-oxopropyl)- (9CI) (CA INDEX NAME)


O
C—CH2—CH2Cl
N
O

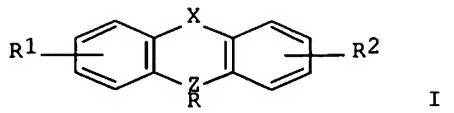
L4 ANSWER 25 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1997:55140 CAPLUS
DN 126:104450
TI Vinyl monomers bearing chromophore moieties and their polymers - synthesis and fluorescence behavior of acrylic monomer having phenoxazinyl moiety and its polymer
AU Yu, Shuyan; Yao, Guangqing; Li, Fumian
CS Dep. Chem., Peking Univ., Beijing, 100871, Peop. Rep. China
SO Gaofenzi Xuebao (1996), (6), 726-731
CODEN: GAXUE9; ISSN: 1000-3304
PB Kexue
DT Journal
LA Chinese
AB A novel acrylic monomer having phenoxazinyl-moiety, N-acryloyl-phenoxazine (APO) was synthesized and its polymer P(APO) was obtained by free radical polymn. The UV-Vis spectrum of P(APO) was different from that of APO due to the disappearing of the double bond. The fluorescence intensity of the monomer was much lower than that of its polymer. This was termed as "structural self-quenching effect" as the authors have reported previously. The fluorescence of the polymer could be quenched by electron-deficient quenchers and the Stern-Volmer consts. of these quenchers were obtained. The two fluorescence live times of P(APO) indicated the complicated state of the chromophores on the polymer chains.
IT **92433-61-9P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; synthesis and fluorescence behavior of acrylic monomer having phenoxazinyl moiety and its polymer)
RN 92433-61-9 CAPLUS
CN 10H-Phenoxazine, 10-(3-chloro-1-oxopropyl)- (9CI) (CA INDEX NAME)



L4 ANSWER 26 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1996:721735 CAPLUS
DN 126:8010
TI Preparation of N-(3-dibenzazepinopropyl)piperidinecarboxylates and analogs
as drugs
IN Doerwald, Florenzio Zaragossa; Andersen, Knud Erik; Madsen, Peter; Joergensen, Tine Krogh; Hohlweg, Rolf; Andersen, Henrik Sune; Treppendahl,
Svend; Olsen, Uffe Bang; Zdenek, Polivka; et al.
PA Novo Nordisk A/s, Den.
SO PCT Int. Appl., 85 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9631498	A1	19961010	WO 1996-DK139	19960401
	W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI				
	RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML				
	CA 2217197	AA	19961010	CA 1996-2217197	19960401
	AU 9651003	A1	19961023	AU 1996-51003	19960401
	AU 708010	B2	19990729		
	EP 820451	A1	19980128	EP 1996-907327	19960401
	EP 820451	B1	20030115		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, SI, LT, LV, FI				
	BR 9604864	A	19980526	BR 1996-4864	19960401
	CN 1183781	A	19980603	CN 1996-193779	19960401
	JP 11503127	T2	19990323	JP 1996-529868	19960401
	CZ 291294	B6	20030115	CZ 1997-3164	19960401
	AT 231144	E	20030215	AT 1996-907327	19960401
	ES 2191090	T3	20030901	ES 1996-907327	19960401
	IL 117810	A1	20010913	IL 1996-117810	19960403
	ZA 9602732	A	19961024	ZA 1996-2732	19960404
	TW 419463	B	20010121	TW 1996-85104810	19960514
	NO 9704605	A	19971204	NO 1997-4605	19971006
PRAI	DK 1995-405	A	19950407		
	DK 1995-1005	A	19950911		
	WO 1996-DK139	W	19960401		

OS MARPAT 126:8010
GI



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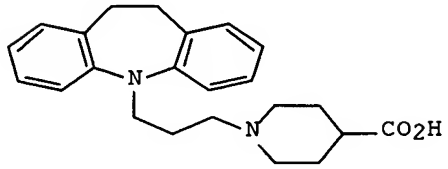


II

AB Title compds. [I; R = N-attached carboxyheterocyclyl, etc.; R1,R2 = H, halo, alkyl, alkoxy, etc.; X = O, CH2CH2, CH2CO, etc.; Z = N(CH2)2-4, CH(CH2)2-4, CH:CH(CH2)1-3] were prepd. for treatment of neurogenic inflammation and non-insulin-dependant diabetes (no data). Thus, 10,11-dihydro-5H-dibenz[b,f]azepine was acylated by Cl(CH2)3COCl and the reduced product aminated by Et 4-piperidinecarboxylate to give, after sapon., title compd. II.HCl.

IT **92425-82-6P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

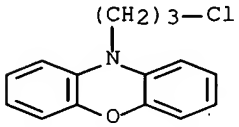
(Reactant or reagent)

(prepn. of N-(3-dibenzazepinopropyl)piperidinecarboxylates and analogs

as drugs)

RN 92425-82-6 CAPLUS

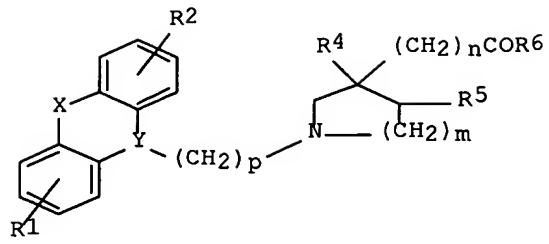
CN 10H-Phenoxazine, 10-(3-chloropropyl)- (9CI) (CA INDEX NAME)



L4 ANSWER 27 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1995:913379 CAPLUS
DN 123:313776
TI Novel azaheterocyclic acids useful as analgesics and antiinflammatories.
IN Andersen, Knud Erik; Olsen, Uffe Bang; Petersen, Hans; Groenvald, Frederik
Christian; Sonnewald, Ursula; Joergensen, Tine Krogh; Andersen, Henrik Sune
PA Novo Nordisk A/S, Den.
SO PCT Int. Appl., 54 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9518793	A1	19950713	WO 1995-DK2	19950103
	W: AM, AU, BB, BG, BR, BY, CA, CN, CZ, EE, FI, GE, HU, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LV, MD, MG, MN, MW, MX, NO, NZ, PL, RO, RU, SD, SI, SK, TJ, TT, UA, UZ, VN				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	IL 112222	A1	19991231	IL 1995-112222	19950102
	CA 2180238	AA	19950713	CA 1995-2180238	19950103
	AU 9513110	A1	19950801	AU 1995-13110	19950103
	AU 691858	B2	19980528		
	EP 738262	A1	19961023	EP 1995-904409	19950103
	EP 738262	B1	20000419		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	CN 1142226	A	19970205	CN 1995-191845	19950103
	CN 1083431	B	20020424		
	HU 75878	A2	19970528	HU 1996-1842	19950103
	JP 09507239	T2	19970722	JP 1995-518275	19950103
	JP 2944221	B2	19990830		
	BR 9506452	A	19970902	BR 1995-6452	19950103
	CZ 286109	B6	20000112	CZ 1996-1921	19950103
	AT 191909	E	20000515	AT 1995-904409	19950103
	ES 2147837	T3	20001001	ES 1995-904409	19950103
	PL 180209	B1	20010131	PL 1995-315294	19950103
	RU 2167152	C2	20010520	RU 1996-116134	19950103
	NZ 277763	A	20011130	NZ 1995-277763	19950103
	ZA 9500031	A	19960704	ZA 1995-31	19950104
	NO 9602811	A	19960904	NO 1996-2811	19960703
	FI 9602749	A	19960904	FI 1996-2749	19960704
PRAI	DK 1994-19	A	19940104		
	DK 1994-1290	A	19941109		
	WO 1995-DK2	W	19950103		

OS CASREACT 123:313776; MARPAT 123:313776
GI



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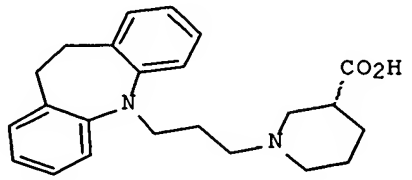


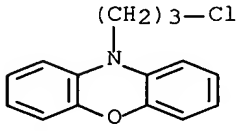
II

AB The invention relates to novel N-substituted azaheterocyclic carboxylic acids and esters I [R1, R2 = H, halo, CF3, alkyl, alkoxy; Y = NCH2, CHCH2, or C:CH, where only the 1st atom is within the ring; X = O, S, CR7R8, CH2CH2, CH:CHCH2, CH2CH:CH, CH2CH2CH2, CH:CH, NR9CO, OCH2, CO, SO; R7, R8, R9 = H, alkyl; p = 1, 2, 3; m = 1, 2; n = 1 when m = 1; or n = 0 when m = 2; R4 = R5 = H, or R4R5 = bond when m = 2; R6 = OH, alkoxy]. Also disclosed are prepn. of I, compns. contg. I, and use of I for treatment of painful, hyperalgesic and/or inflammatory conditions in which C-fibers play a pathophysiol. role by eliciting neurogenic pain or inflammation. For example, 10,11-dihydro-5H-dibenz[b,f]azepine was alkylated in the 5-position by NaH and 3-bromopropyl tetrahydro-2-pyranyl ether, followed by deprotection with HCl in refluxing aq. MeOH, to give the 5-(3-hydroxypropyl) deriv. This underwent mesylation with MeSO2Cl and Et3N, and the mesylate was treated with (R)-3-piperidinecarboxylic acid Et ester (tartrate salt) and then hydrolyzed to give title compd. II, isolated as the HCl salt (III). In the formalin-induced pain response test in mice, III at 0.1 mg/kg gave 50% inhibition.

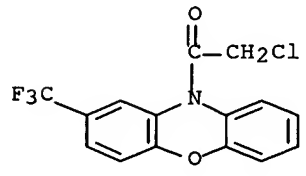
IT **92425-82-6P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; prepn. of azaheterocyclic acids as analgesics and antiinflammatories)

RN 92425-82-6 CAPLUS

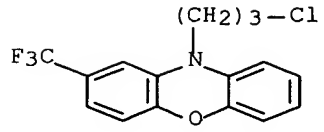
CN 10H-Phenoxazine, 10-(3-chloropropyl)- (9CI) (CA INDEX NAME)



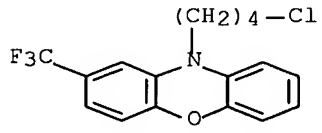
L4 ANSWER 28 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1994:280030 CAPLUS
DN 120:280030
TI Analysis of phenoxazine chemosensitizers: an electron ionization and keV-ion beam bombardment mass spectrometry study
AU Dass, Chhabil; Thimmaiah, K. N.; Jayashree, B. S.; Seshadri, Ramakrishnan; Israel, Mervyn; Houghton, Peter J.
CS Charles B. Stout Neurosci. Mass Spectrometry, Univ. Tennessee, Memphis, TN, 38163, USA
SO Biological Mass Spectrometry (1994), 23(3), 140-6
CODEN: BIMSEH; ISSN: 1052-9306
DT Journal
LA English
AB The mass spectral behavior of a set of eight 2- and 10-disubstituted phenoxazines putatively having anticancer drug enhancer properties was investigated. Both electron ionization (EI) and keV-ion beam bombardment (liq. secondary ion mass spectrometry, LSIMS) were used. As expected, EI led to extensive fragmentation to produce structurally characteristics ions. Except in one example, the mol. ions were reasonably abundant. Two different liq. matrixes - sulfolane and 3-nitrobenzyl alc. - were used to obtain LSIMS data. The use of the latter produced more stable mol. ions. Ion beam bombardment also produced several structure-specific fragments. A unique feature of the LSI spectra obtained using either of the above matrixes is prodn. of both M+. and [M + H]+ ions, with the former being more abundant in most cases. Adduct formation with the liq. matrixes was also obsd. for many compds.
IT **154784-64-2 154784-65-3 154784-66-4**
RL: PRP (Properties)
(mass spectra of)
RN 154784-64-2 CAPLUS
CN 10H-Phenoxazine, 10-(chloroacetyl)-2-(trifluoromethyl)- (9CI) (CA INDEX NAME)



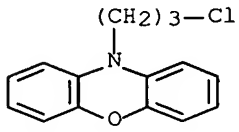
RN 154784-65-3 CAPLUS
CN 10H-Phenoxazine, 10-(3-chloropropyl)-2-(trifluoromethyl)- (9CI) (CA INDEX NAME)



RN 154784-66-4 CAPLUS
CN 10H-Phenoxazine, 10-(4-chlorobutyl)-2-(trifluoromethyl)- (9CI) (CA INDEX
NAME)



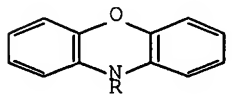
L4 ANSWER 29 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1994:260681 CAPLUS
DN 120:260681
TI Pharmacological characterization of N-substituted phenoxazines directed toward reversing Vinca alkaloid resistance in multidrug-resistant cancer cells
AU Horton, Julie K.; Thimmaiah, Kuntebommanahalli N.; Harwood, Franklin C.; Kuttesch, John F.; Houghton, Peter J.
CS Dep. Mol. Pharamcol., St. Jude Child. Res. Hosp., Memphis, TN, 38105, USA
SO Molecular Pharmacology (1993), 44(3), 552-9
CODEN: MOPMA3; ISSN: 0026-895X
DT Journal
LA English
AB Previously the authors reported the synthesis and partial characterization of 21 N10-substituted phenoxazines in reversing Vinca alkaloid resistance. Here, the authors report on a subset of these compds.; the authors have compared their activities in increasing Vinca alkaloid accumulation and reversing drug resistance in KB-ChR8-5 and GC3/c1 (human colon carcinoma) cell lines. Results demonstrated that 1) N-substituted phenoxazinex increase accumulation of vinblastine; 2) within this series, there is little correlation or ranking of activity between the two cell lines when Vinca alkaloid accumulation is compared at equal concns. of modulator; 3) N-substituted phenoxazines demonstrate both quant. and qual. differences, compared with verapamil, a std. modulator; and 4) the series includes at least two compds., 10-[3'-[N-bis(hydroxyethyl)amino]propyl]phenoxazine and 10-(N-piperidinoacetyl)phenoxazine, which increase Vinca alkaloid accumulation but do not significantly inhibit efflux. Addnl., certain of these multidrug resistance modulators significantly enhance accumulation (8-50-fold) of Vinca alkaloids in cell lines with very low or undetectable P-glycoprotein levels, where verapamil has little activity. It is concluded that at least part of the activity of some of these N-substituted phenoxazine modulators may be mediated through a P-glycoprotein-independent mechanism.
IT **92425-82-6**
RL: BIOL (Biological study)
(Vinca alkaloid resistance reversal by, in multidrug-resistant tumor cells of humans)
RN 92425-82-6 CAPLUS
CN 10H-Phenoxazine, 10-(3-chloropropyl)- (9CI) (CA INDEX NAME)



L4 ANSWER 30 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1993:539247 CAPLUS
DN 119:139247
TI Preparation of N-substituted phenoxazines for treating multidrug resistant
cancer cells
IN Houghton, Peter J.; Horton, Julie K.; Thimmaiah, Kuntebommanahalli N.
PA Research Corp. Technologies, Inc., USA
SO PCT Int. Appl., 53 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

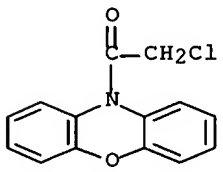
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9303729	A1	19930304	WO 1992-US6681	19920810
	W: CA, JP				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, SE				
	US 5371081	A	19941206	US 1993-126812	19930924
PRAI	US 1991-744619		19910812		

OS MARPAT 119:139247
GI

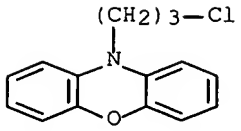


I

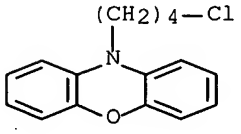
AB Title compds. I (R = H, A(CH2)b(CO)a wherein A = (substituted) dialkylamino, substituted heterocyclyl, a = 0, 1; b = 0-6, a + b .noteq. 0) or a salt thereof showing potentiation of antitumor effectiveness of chemotherapeutic agents, particularly in multiple drug resistant cells, are prepd. To NaNH2 in liq. NH3 was added phenoxazine followed by BrCH2CH2CH2Cl to give I (R = Cl(CH2)3). Addn. I was prepd. and evaluated.
IT **43170-47-4P 92425-82-6P 142744-98-7P**
142745-06-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, for treatment of multidrug resistant cancer cells)
RN 43170-47-4 CAPLUS
CN 10H-Phenoxazine, 10-(chloroacetyl)- (9CI) (CA INDEX NAME)



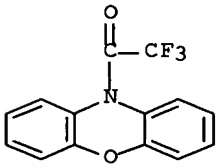
RN 92425-82-6 CAPLUS
CN 10H-Phenoxazine, 10-(3-chloropropyl)- (9CI) (CA INDEX NAME)



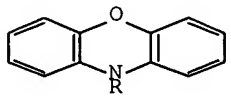
RN 142744-98-7 CAPLUS
CN 10H-Phenoxazine, 10-(4-chlorobutyl)- (9CI) (CA INDEX NAME)



RN 142745-06-0 CAPLUS
CN 10H-Phenoxazine, 10-(trifluoroacetyl)- (9CI) (CA INDEX NAME)



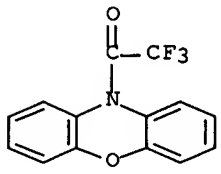
L4 ANSWER 31 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1992:550951 CAPLUS
DN 117:150951
TI Synthesis and chemical characterization of N-substituted phenoxazines directed toward reversing vinca alkaloid resistance in multidrug-resistant cancer cells
AU Thimmaiah, Kuntebommanahalli N.; Horton, Julie K.; Seshadri, Ramakrishnan; Israel, Mervyn; Houghton, Janet A.; Harwood, Franklin C.; Houghton, Peter J.
CS Dep. Biochem. Clin. Pharmacol., St. Jude Child. Res. Hosp., Memphis, TN, 38101, USA
SO Journal of Medicinal Chemistry (1992), 35(18), 3358-64
CODEN: JMCMAR; ISSN: 0022-2623
DT Journal
LA English
GI



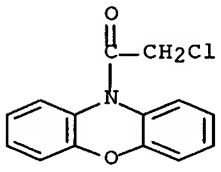
I

AB A series of N-substituted phenoxazines I [R = (CH2)nR1, COCH2R1, R1 = NEt2, N(CH2CH2OH)2,4-morpholinyl, 1-piperidinyl, 1-pyrrolidinyl, (.beta.-hydroxyethyl)piperazino, n = 3, 4] has been synthesized in an effort to find more specific and less toxic modulators of multidrug resistance (MDR) in cancer chemotherapy. Thus, I [R = (CH2)nCl, COCH2Cl] underwent iodide-catalyzed nucleophilic substitution on reaction with various secondary amines, including N,N-diethylamine, N,N-diethanolamine, morpholine, piperidine, pyrrolidine and (.beta.-hydroxyethyl)piperazine. All of the compds. were examd. for cytotoxicity and for their ability to increase the accumulation of the vinca alkaloids, vincristine (VCR) and vinblastine (VLB) in multidrug-resistant GC3/C1 (human colon adenocarcinoma) and KBChR-8-5 (HeLa variant) cell lines. Compds. were compared to the std. modulator verapamil (VRP). Substitutions on the phenoxazine ring at position 10 were assocd. with an increase in antiproliferative and anti-MDR activities. Modification of the length of the alkyl bridge and the type of amino side chain also influenced the potency of these effects. These modulators, at nontoxic concns., potentiated the cytotoxicity of VCR and VLB in GC3/C1 and KBChR-8-5 cells. Further, I [R = (CH2)nR1, R1 = 4-morpholinyl, n = 3, 4] enhanced accumulation of VLB in GC3/C1, KBChR8-5 and highly resistant KB-V1 cells to a level significantly greater than the maximal level achieved with VRP.
IT **142745-06-0P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and anti-multidrug resistance activity of)

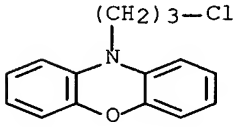
RN 142745-06-0 CAPLUS
CN 10H-Phenoxazine, 10-(trifluoroacetyl)- (9CI) (CA INDEX NAME)



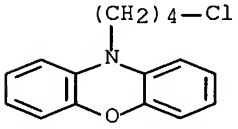
IT **43170-47-4P 92425-82-6P 142744-98-7P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
RACT
(Reactant or reagent)
(prepn., amination, and anti-multidrug resistance activity of)
RN 43170-47-4 CAPLUS
CN 10H-Phenoxazine, 10-(chloroacetyl)- (9CI) (CA INDEX NAME)



RN 92425-82-6 CAPLUS
CN 10H-Phenoxazine, 10-(3-chloropropyl)- (9CI) (CA INDEX NAME)



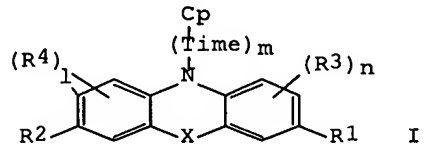
RN 142744-98-7 CAPLUS
CN 10H-Phenoxazine, 10-(4-chlorobutyl)- (9CI) (CA INDEX NAME)



L4 ANSWER 32 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1992:245210 CAPLUS
DN 116:245210
TI Silver halide color photographic material
IN Ikesu, Satoru
PA Konica Co., Japan
SO Jpn. Kokai Tokkyo Koho, 19 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 04037746	A2	19920207	JP 1990-143897	19900601
PRAI JP 1990-143897		19900601		

GI

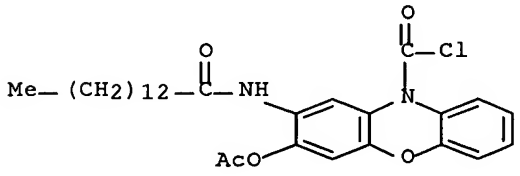


I

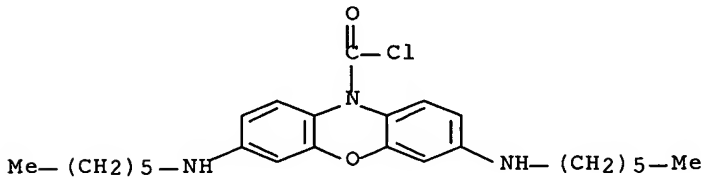
AB The title material contains a coupler represented by general structure I (Cp = a coupler residue; Time = a timing group; X = O, S, etc.; R1 to R4 = H or a substituent; n, l = an integer; n, l .gtoreq.1; m = 0 or 1). The title material gives excellent color reprodn.

IT **141549-55-5P 141549-57-7P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)(prepn. and reaction of, in prepn. of photog. coupler)

RN 141549-55-5 CAPLUS
CN 10H-Phenoxazine-10-carbonyl chloride, 3-(acetyloxy)-2-[(1-oxotetradecyl)amino]- (9CI) (CA INDEX NAME)



RN 141549-57-7 CAPLUS
CN 10H-Phenoxazine-10-carbonyl chloride, 3,7-bis(hexylamino)- (9CI) (CA INDEX NAME)

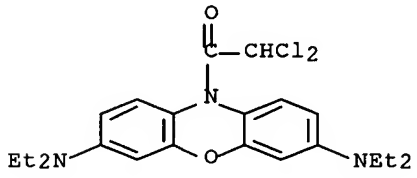


L4 ANSWER 33 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1991:84075 CAPLUS
DN 114:84075
TI Sublimation-type thermal transfer recording
IN Suzuki, Akira; Mochizuki, Hidehiro; Shimada, Masaru; Kamimura, Hiroyuki
PA Ricoh Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 12 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 02215579	A2	19900828	JP 1989-37366	19890216
JP 2798954	B2	19980917		
PRAI JP 1989-37366		19890216		

AB The title process providing sharp images even in multiuse mode is done by using a recording medium comprising a substrate, a sublimable compd. source layer contg. a sublimable compn. dispersed in a binder, and a layer from which the sublimable compd. is transferred, in that order, and a receptor contg. a layer contg. a developer, wherein the medium is heated so that the sublimable compd. is transferred to the receptor and reacts with the developer to form an image. Typically, 3,7-bis(diethylamino)-10-dichloroacetylphenoxazine was used as sublimable compd., and activated clay as developer.

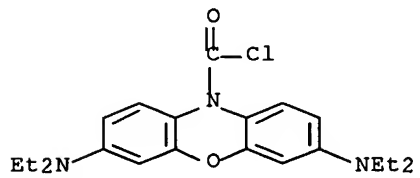
IT **67883-02-7**, 3,7-Bis(diethylamino)-10-dichloroacetylphenoxazine
RL: USES (Uses)
(color formers, in thermal transfer printer ribbons)
RN 67883-02-7 CAPLUS
CN 10H-Phenoxazine-3,7-diamine, 10-(dichloroacetyl)-N,N,N',N'-tetraethyl- (9CI) (CA INDEX NAME)



L4 ANSWER 34 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1990:432033 CAPLUS
DN 113:32033
TI Photothermographic element containing redox-dye-releasing compound
IN Swain, Steven; Tran Van Thien; Poon, Stephen Sik Chiu
PA Minnesota Mining and Mfg. Co., USA
SO Eur. Pat. Appl., 30 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 350202	A2	19900110	EP 1989-306578	19890628
	EP 350202	A3	19901010		
	EP 350202	B1	19950125		
	R: BE, DE, FR, GB, NL				
	CA 1314542	A1	19930316	CA 1989-603219	19890619
	US 4981775	A	19910101	US 1989-372007	19890626
	JP 2648368	B2	19970827	JP 1989-171737	19890703
PRAI	GB 1988-15829		19880704		

OS MARPAT 113:32033
AB A photothermog. element is described comprising a support bearing an image forming system comprising: (a) a photosensitive Ag halide; (b) an org. Ag compd.; (c) a polymer binder; and (d) a reducing agent for the org. Ag compd., wherein the reducing agent comprises a redox-dye-releasing compd. of the formula RCOAD [R represents an org. group which may be oxidatively cleaved to a thermally immobile form; A represents a bond or a divalent linking group having a chain consisting of up to 12 atoms, which is linked to the carbonyl group via a C atom or an O atom; and D represents the chromophore of a thermally mobile dye]. The material has improved sensitometric properties.
IT **83531-24-2**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, redox-dye-releasing compd. for photothermog. from)
RN 83531-24-2 CAPLUS
CN 10H-Phenoxazine-10-carbonyl chloride, 3,7-bis(diethylamino)- (9CI) (CA INDEX NAME)

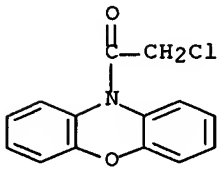


L4 ANSWER 35 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1990:118796 CAPLUS
DN 112:118796
TI Pyrroloquinoline- and pyrrolophenothiazine, and pyrrolophenoxazinecarboxamides as inflammation inhibitors
IN Mylari, Banavara Lakshmana; McManus, James Michael; Lombardino, Joseph George
PA Pfizer Inc., USA
SO Eur. Pat. Appl., 25 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 332364	A2	19890913	EP 1989-302197	19890306
	EP 332364	A3	19910403		
	R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	WO 8908654	A1	19890921	WO 1988-US781	19880311
	W: FI, HU, NO, US				
	HU 51619	A2	19900528	HU 1988-5829	19880311
	HU 201757	B	19901228		
	IL 89480	A1	19940412	IL 1989-89480	19890303
	ZA 8901800	A	19901031	ZA 1989-1800	19890309
	CA 1335592	A1	19950516	CA 1989-593185	19890309
	DK 8901166	A	19890912	DK 1989-1166	19890310
	DK 169723	B1	19950123		
	AU 8931204	A1	19890914	AU 1989-31204	19890310
	AU 605410	B2	19910110		
	JP 01275580	A2	19891106	JP 1989-59481	19890310
	JP 06076408	B4	19940928		
	NO 8904350	A	19891101	NO 1989-4350	19891101
	NO 170418	B	19920706		
	NO 170418	C	19921014		
	FI 96315	B	19960229	FI 1989-5333	19891109
	FI 96315	C	19960610		
	US 5403839	A	19950404	US 1989-438469	19891113
	US 5624929	A	19970429	US 1995-445629	19950522
PRAI	WO 1988-US781		19880311		
	US 1989-438469		19891113		
	US 1994-357615		19941214		

OS CASREACT 112:118796; MARPAT 112:118796
GI For diagram(s), see printed CA Issue.
AB Title compds. I [X = O, S, CH2, (CH2)2; R1 = H, halo, alkoxy, alkanoyl, alkyl, CF3; R2 = (substituted) Ph, (substituted) heterocyclyl; R3, R4 = H, halo, alkyl, CF3; R3R4 = group to form (substituted) carbocyclic arom. ring] are prepd. I are useful for treating inflammation or other prostaglandin or leukotriene mediated diseases, e.g. arthritis, allergy, bronchitis, pulmonary hypertension, pulmonary hypoxia, peptic ulcers, inflammatory bowel disease, cardiovascular spasm, psoriasis, and asthma (no data). A pyrrolophenothiazinone II (R = H) in DMF was successively treated with NaH and 2,4-F2C6H3NCO to give II (R = 2,4-F2C6H3NHCO).
IT **43170-47-4**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, in prepn. of inflammation inhibitors)
RN 43170-47-4 CAPLUS

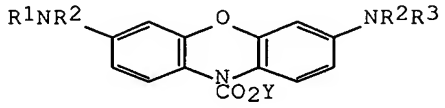
CN 10H-Phenoxazine, 10-(chloroacetyl)- (9CI) (CA INDEX NAME)



L4 ANSWER 36 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1989:203059 CAPLUS
DN 110:203059
TI Phenoxazine derivatives and thermal-transfer recording materials
IN Anzai, Mitsutoshi; Utsunomiya, Akira; Yamaguchi, Masahiko
PA Hodogaya Chemical Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 64003176	A2	19890106	JP 1987-156637	19870625
PRAI JP 1987-156637		19870625		

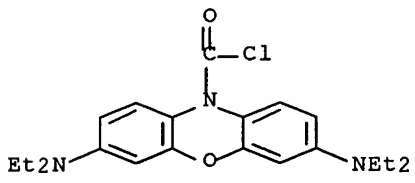
OS MARPAT 110:203059
GI



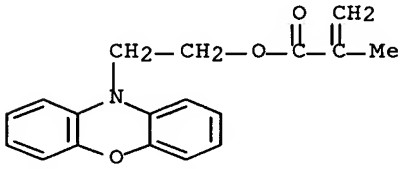
I

AB Phenoxazine compds. I (R1-2 = C1-4 alkyl; R3 = C1-4 alkyl, aryl; Y = C1-8 alkyl, aryl, or aralkyl optionally having halo, alkoxy, dialkylamino substituents) are used as sublimable color formers in thermal-transfer recording materials. Thus, 3,7-bis(diethylamino)phenoxazonium chloride was reduced and treated with phosgene to give 10-chlorocarbonyl-3,7-bis(diethylamino)phenoxazine, which was treated with K tert-butoxide to give I (R1-4 = Et, Y = tert-butyl) (II). Papers coated with II gave thermal-transfer prints by pressurized heating.

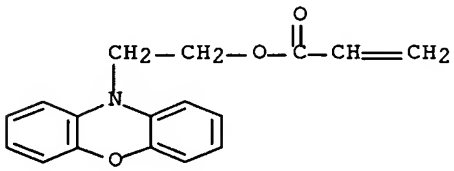
IT **83531-24-2P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(prepn. and reaction of, with metal alkoxides, thermal-transfer color former prepn. by)
RN 83531-24-2 CAPLUS
CN 10H-Phenoxazine-10-carbonyl chloride, 3,7-bis(diethylamino)- (9CI) (CA INDEX NAME)



L4 ANSWER 37 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1986:553576 CAPLUS
DN 105:153576
TI Synthesis of N-substituted phenoxazine polymers bearing vinyl backbone
AU Kamogawa, Hiroyoshi; Kobayashi, Masahiko; Yoshihara, Shigeki
CS Dep. Appl. Chem., Yamanashi Univ., Kofu, 400, Japan
SO Journal of Polymer Science, Part A: Polymer Chemistry (1986), 24(7), 1565-75
CODEN: JPACEC; ISSN: 0887-624X
DT Journal
LA English
AB Vinyl monomers bearing N-substituted phenoxazine or 2,8-dimethylphenoxazine units were synthesized starting with the corresponding phenoxazines. N-substituents were 2-vinylbenzyloxycarbonylethyl group prepd. via 2-carboxyethyl group, 3-methacrylamido-, 3-acrylamido-, or 3-(4-styrenesulfonamido)propyl group prepd. via 3-aminopropyl group, vinylbenzyl, or 2-vinyloxyethyl group attached by the displacements of sodium salts of the phenoxazines to the chlorides, and 2-methacryloyl- or 2-acryloyloxyethyl group prepd. via 2-hydroxyethyl group. Free-radical polymns. of these novel monomers proceeded smoothly, except those with 2-vinyloxyethyl group, which were susceptible to BF3-etherate. Changes of the visible absorption spectrum of iodine in THF with addn. of the monomers and polymers were considerable, with the appearance of new absorption peaks or shoulders in major cases.
IT **104595-54-2P 104595-55-3P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and polymn. of)
RN 104595-54-2 CAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-(10H-phenoxazin-10-yl)ethyl ester (9CI) (CA INDEX NAME)



RN 104595-55-3 CAPLUS
CN 2-Propenoic acid, 2-(10H-phenoxazin-10-yl)ethyl ester (9CI) (CA INDEX NAME)

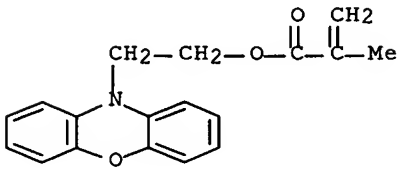


IT **104671-28-5P 104671-29-6P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
RN 104671-28-5 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-(10H-phenoxazin-10-yl)ethyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

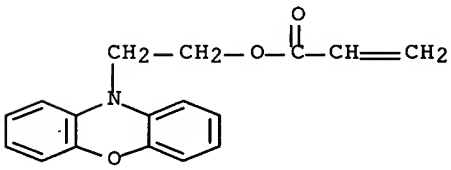
CRN 104595-54-2
CMF C18 H17 N O3



RN 104671-29-6 CAPLUS
CN 2-Propenoic acid, 2-(10H-phenoxazin-10-yl)ethyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 104595-55-3
CMF C17 H15 N O3

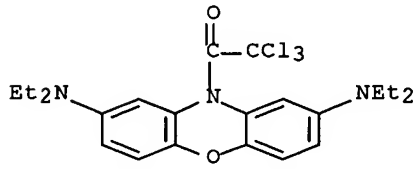


L4 ANSWER 38 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1986:79177 CAPLUS
DN 104:79177
TI Particles for image formation
IN Takashima, Yuji; Yubaue, Keiichi; Yamamoto, Hajime
PA Matsushita Electric Industrial Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 60162264	A2	19850824	JP 1984-17745	19840202
PRAI JP 1984-17745		19840202		

AB Imaging particles which contain an amine silicate have specific resistivity 108-1012 .OMEGA. cm and are used to develop electrostatic images. The particles provide one-component electrophotog. developers, enable transfer of electrostatic images independently of the resistivity of image receiving sheets, and show good resistance to heat. Thus, a dispersion contg. carbon black, colloidal SiO2 (QAS), and butadiene-styrene copolymer (Dan Bond) was spray-dried to obtain particles with specific resistivity 6 .times. 109 .OMEGA. cm, which were then used to develop electrostatic images formed on Se (pos.-charging) and ZnO (neg.-charging) photosensitive materials to give pos. images, which were transferred with efficiency of 80% onto plain paper.

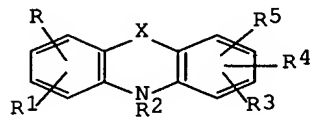
IT **100288-51-5**
RL: USES (Uses)
(electrophotog. 1-component color developer contg.)
RN 100288-51-5 CAPLUS
CN 10H-Phenoxazine-2,8-diamine, N,N,N',N'-tetraethyl-10-(trichloroacetyl)-(9CI) (CA INDEX NAME)



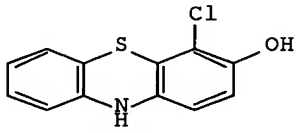
L4 ANSWER 39 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1986:15081 CAPLUS
DN 104:15081
TI Leukotriene biosynthesis inhibitors
IN Fortin, Rejean; Guindon, Yvan; Lau, Cheuk K.; Rokach, Josua; Yoakim, Christiane
PA Merck Frosst Canada, Inc., Can.
SO Eur. Pat. Appl., 125 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 138481	A2	19850424	EP 1984-306639	19840928
	EP 138481	A3	19870401		
	EP 138481	B1	19910626		
	R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
	US 4666907	A	19870519	US 1984-654991	19840926
	DK 8404756	A	19850406	DK 1984-4756	19841004
	ES 536525	A1	19880401	ES 1984-536525	19841004
	CA 1272722	A1	19900814	CA 1984-464754	19841004
	JP 60155165	A2	19850815	JP 1984-208402	19841005
	US 4845083	A	19890704	US 1987-1946	19870109
PRAI	US 1983-539342		19831005		
	US 1984-654991		19840926		

OS CASREACT 104:15081
GI



I



II

AB A pharmaceutical compn. capable of inhibiting leukotriene biosynthesis or action in mammals contains a diluent, carrier or excipient, and phenothiazines and their analogs I [R, R1, R3, R5 = H, alkenyl, OR6, halo, CF3, SR6, CO2R7, COR8, tetrazolyl, NHCOR9, NR10R11, NHSO2R12, COCH2OH, SOR13, CONR10R11, SO2NR10R11, SO2R14, NO2, O2CR8, O2CNR10R11, cyano, (un)substituted alkyl, Ph; R2 = H, acyl, carbamoyl, CONHR9, CO2R9, 4-MeC6H4SO2, MeSO2, acyloxyalkoxycarbonyl, (un)substituted alkyl, benzoyl; R4 = H, OR15; R6 = H, cyano, CHO, (un)substituted alkyl, Ph; R7 = H, alkyl, Ph; R8 = H, CO2R7, alkoxy, acyloxyalkoxy, (un)substituted alkyl, phenyl; R9 = Ph, (un)substituted alkyl; R10, R11 = H, acyl, (un)substituted Ph; NR10R11 = heterocycloalkyl; R12 = OH, alkyl, alkoxy, Ph; R13 = cyano, CHO, perfluoroalkyl, (un)substituted Ph, alkyl; R14 = H, OH, cyano, CHO, perfluoroalkyl, (un)substituted Ph, alkyl; R15 = H, alkyl,

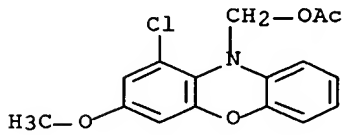
alkylacyl, arylsulfonyl, (un)substituted phenylacyl, benzoyl; X = Se, S, SO, SO2, O]. The compn. may addnl. contain a nonsteroidal antiinflammatory, esp. indomethacin, a peripheral analgesic, a cyclooxygenase inhibitor, a leukotriene antagonist, a leukotriene inhibitor, an H2-receptor antagonist, an antihistaminic, a prostaglandin antagonist, or a thromboxane antagonist. Several I were synthesized. For example, 4-chloro-3H-phenothiazin-3-one was treated with aq. Na2S2O4 to give 95% chlorohydoxy-10H-phenothiazine II. At 3 .mu.g/mL II gave 97% inhibition of antigen challenge by egg albumin in guinea pig trachea.

IT **99551-91-4**

RL: BIOL (Biological study)
(pharmaceutical, with leukotriene biosynthesis-inhibiting activity)

RN 99551-91-4 CAPLUS

CN 10H-Phenoxazine-10-methanol, 1-chloro-3-methoxy-, acetate (ester) (9CI) (CA INDEX NAME)



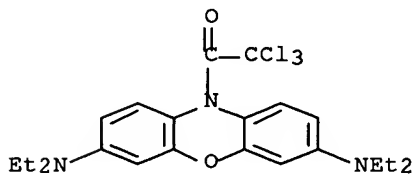
L4 ANSWER 40 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1985:603733 CAPLUS
DN 103:203733
TI Imaging process
PA Matsushita Electric Industrial Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 60118852	A2	19850626	JP 1983-225920	19831130
	JP 04021598	B4	19920410		
PRAI	JP 1983-225920		19831130		

AB An imaging process is claimed which involves the following steps: (1) formation of patterns on a support by using conductive particles contg. a sublimable or volatile dye, (2) spreading of dye-free conductive particles whose particle size is greater than that of the dye-contg. particles, and (3) hot-pressing the particle-coated support to effect sublimation or volatilization of the dye. Particles contg. sublimable or volatile color formers may be used instead of the dye-contg. particles. The particle images are preferably formed by using electrostatog. and transferred onto the support (or a receptor). Thus, spherical particles composed of magnetite powder and a melamine resin were dispersed in a soln. contg. C. I. Disperse Red and Et cellulose. Then the dispersion was spray dried, the resultant coated particles then dispersed in an ECR 34 soln. and the dispersion spray dried to give dye-contg. particles (10-20 .mu. diam.; 8 .times. 108 .OMEGA.-cm). Sep., magnetite-melamine resin mixt. particles were coated with ECR-24 to give dye-free particles (particle size 20-25 .mu.; 3 .times. 108 .OMEGA..cntdot.cm. The above 2 types of particles were used to give electrostatog. images with good color tone gradient reproducibility.

IT **67883-03-8**
RL: TEM (Technical or engineered material use); USES (Uses)
(electrostatog. toners contg., for color process)

RN 67883-03-8 CAPLUS
CN 10H-Phenoxazine-3,7-diamine, N,N,N',N'-tetraethyl-10-(trichloroacetyl)-(9CI) (CA INDEX NAME)



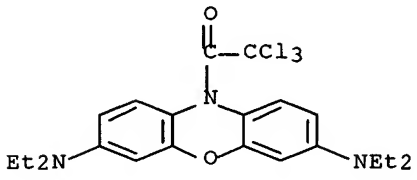
L4 ANSWER 41 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1985:603732 CAPLUS
DN 103:203732
TI Electrostatographic dye image developer particles
PA Matsushita Electric Industrial Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 60118850	A2	19850626	JP 1983-225922	19831130
	JP 06019592	B4	19940316		
PRAI	JP 1983-225922		19831130		

AB The title particles are composed of sublimable or vaporizable dye-contg. color-forming particles which are not fixed on the image receptor and auxiliary particles which do not contain the above dye and do not attach to the image receptor having the particle diam. larger than that of the color-forming particles. The auxiliary particles may be obtained by coating magnetite particles with Sumitex M3 and the color-forming particles by coating the auxiliary particles with a dye compn. contg. a sublimable dye. The above particles may be used to develop electrostatic latent images to provide a master having particle images which may then be laid on a plain paper and dye images are then formed on the plain paper by sending them through a pressing type heater.

IT **67883-03-8**
RL: USES (Uses)
(electrostatog. dye image developer particles with color-forming particles contg.)

RN 67883-03-8 CAPLUS
CN 10H-Phenoxazine-3,7-diamine, N,N,N',N'-tetraethyl-10-(trichloroacetyl)- (9CI) (CA INDEX NAME)



L4 ANSWER 42 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1985:603719 CAPLUS
DN 103:203719
TI Image forming to eliminate reduced color purity in portions of high color density
IN Yamamoto, Hajime; Matsuda, Hiromu; Yubakami, Keiichi; Takashima, Yuji
PA Matsushita Electric Industrial Co., Ltd. , Japan
SO PCT Int. Appl., 19 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 8502470	A1	19850606	WO 1984-JP560	19841122
	W: US				
	RW: DE, FR, GB				
	JP 60118853	A2	19850626	JP 1983-225921	19831130
	JP 02042222	B4	19900921		
	EP 165319	A1	19851227	EP 1984-904179	19841122
	EP 165319	B1	19910320		
	R: DE, FR, GB				
	US 4613555	A	19860923	US 1985-762149	19850722
PRAI	JP 1983-225921		19831130		
	WO 1984-JP560		19841122		

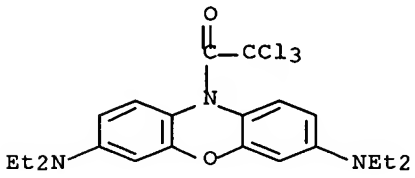
AB A color electrophotog. process for producing images without reduced color purity in high color d. areas is comprised of electrostatically adhering elec. conductive light-transmitting particles onto a photoconductive surface, exposing the particle layer to a light image, and sepg. the particles which transmit the light from those which do not transmit the light to obtain a particle image. After the exposure step, the elec. potentials of the particles which transmit the light and the particles which do not transmit the light are equalized and it is thus possible to eliminate the redn. of color purity in high color d. areas. Thus, a red soln. comprised of butadiene-styrene resin 100, silica 80, C.I. Pigment Red 5 2.6, C.I. Pigment Orange 21115 5.3, an anionic surfactant 1, 3,7-bis(diethylamino-10-trichloroacetyl)phenoxazine 8, and H2O 130 wt. parts, a green soln. comprised of butadiene-styrene resin 100, silica 80, C.I. Pigment Green 36 5.4, C.I. Violet Yellow 20 0.8, .beta.-type Cu phthalocyanine 2.2, an anionic surfactant 0.3, a nonionic surfactant 0.46, 4-(5-chloro-1,3,3-trimethylindolino)methyl-7-(N-methyl-N-phenyl)amino-5'-chloro-1',3',3'-trimethylspiro[2H-1-benzopyran-(2H)-indole] 3, and H2O 160 wt. parts, and a purple soln. comprised of butadiene-styrene resin 100, silica 80, C.I. Pigment Blue 15 3, dioxazine violet 0.5, methyl violet lake 0.5, an anionic surfactant 0.3, and N-(1,2-dimethyl-3-yl)methylidyne-2,4-dimethoxyaniline 5, and H2O 160 wt. parts were prepd., dispersed in a ballmill, spray-dried to give 5-50 .mu. red, green, and purple particles, resp., coated with a Cu iodide soln. (in MeCN), and dried to give

colored
particles with a resistivity of .apprx.103 .OMEGA.-cm. A ZnO photoconductive plate was corona-charged to -400 V, covered with a layer of a mixt. of the colored particles prepd. above, and photoimaged to produce a color image of excellent quality.

IT **67883-03-8**
RL: USES (Uses)
(red light-transmitting conductive toner particles contg. pigments and,
for color electrophotog.)

RN 67883-03-8 CAPLUS

CN 10H-Phenoxazine-3,7-diamine, N,N,N',N'-tetraethyl-10-(trichloroacetyl)-(9CI) (CA INDEX NAME)



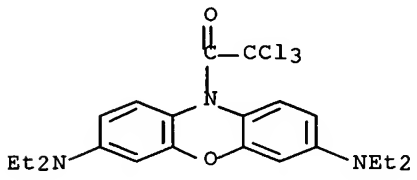
L4 ANSWER 43 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1985:569859 CAPLUS
DN 103:169859
TI Color electrophotography by using colored light-transmitting particles
PA Matsushita Electric Industrial Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 60125855	A2	19850705	JP 1983-233876	19831212
PRAI	JP 1983-233876		19831212		

AB The title process which provides images with fog-free background by a small amt. of light exposure is effected by charging an electrophotog. plate contg. a photoconductive substance (e.g., ZnO), attaching on the above charged plate by electrostatic force light-transmitting colored particles (preferably elec. conductive), imagewise exposure of the plate from the particle side, and then removing from the plate light-transmitted particles by adjusting the elec. potential on the particles approx. equal to that of the exposed electrophotog. plates (by applying an elec. potential instead of giving a large amt. of light exposure). The remaining colored particle images on the plate are transferred to a clay paper which is then heated to sublime the sublimable leuco dye coated on the particles to form color image on the clay paper.

IT **67883-03-8**
RL: USES (Uses)
(sublimable dye, color electrophotog. with light-transmitting red particles from compns. contg.)

RN 67883-03-8 CAPLUS
CN 10H-Phenoxazine-3,7-diamine, N,N,N',N'-tetraethyl-10-(trichloroacetyl)- (9CI) (CA INDEX NAME)

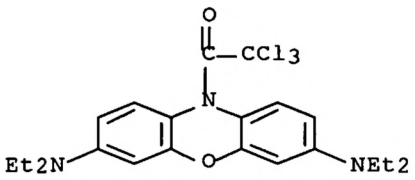


L4 ANSWER 44 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1985:430275 CAPLUS
DN 103:30275
TI Color image forming particles for electrophotography
PA Matsushita Electric Industrial Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 60048049	A2	19850315	JP 1983-156597	19830826
PRAI	JP 1983-156597		19830826		

AB The title particles for electrophotog. color image formation contain red-light-transmitting particles contg. a sublimable color former coloring in cyan, green-light-transmitting particles contg. a sublimable color former coloring in magenta, blue-light-transmitting particles contg. a sublimable color former coloring in yellow, and white-light-transmitting particles contg. a sublimable color former coloring in black. The particles are useful for color image formation in information recording fields and show good color sepn. Thus, a dispersion contg. C.I. Pigment Red 5 1, C.I. Pigment Orange 15 2, 3,7-bis(diethylamino)-10-trichloroacetylphenoxazine 2.2, butadiene-styrene copolymer 38, finely powd. SiO2 30, an anionic surfactant 0.4, and water 52 parts was spray dried to prep. red particles (R). A dispersion contg. C.I. Pigment Green 36 2, C.I. Pigment Yellow 12 0.3, .gamma.-diethylamino-1,3,3-trimethyl-5-chloroindolinobenzospiropyran 1.6, butadiene-styrene copolymer 38, finely powd. SiO2 30, an anionic surfactant 0.4, and water 52 parts was spray dried to prep. green particles (G). A dispersion contg. C.I. Pigment Blue 15 3, C.I. Pigment Violet 1 0.5, C.I. Pigment Violet 3 0.5, N-(1,2-dimethyl-3-yl)methylidene-2,4-dimethoxyaniline (sic) 3.2, butadiene-styrene copolymer 38, finely powd. SiO2 30, an anionic surfactant 0.4, and water 53 parts was spray dried to prep. blue particles (B). Sep., a dispersion contg. 3,7-bis(diethylamino)-10-trichloroacetylphenoxazine 0.7, 7'-diethylamino-1,3,3-trimethyl-5-chloroindolinobenzospiropyran 0.3, N-(1,2-dimethyl-3-yl)methylidene-2,4-dimethoxyaniline (sic) 0.8, butadiene-styrene copolymer 38, finely powd. SiO2 30, an anionic surfactant 0.4, and water 52 parts was spray dried to prep. white particles (W). Then, color image-forming particles were prepd. by using R, G, B, and W (2:2:2:1 in ratio), and color copies obtained by using the particles showed good color balances in red and black and good tone reprodn.

IT **67883-03-8**
RL: USES (Uses)
(color image-forming particles contg., for electrophotog.)
RN 67883-03-8 CAPLUS
CN 10H-Phenoxazine-3,7-diamine, N,N,N',N'-tetraethyl-10-(trichloroacetyl)-(9CI) (CA INDEX NAME)


O
C—CCl3
N
Et2N
O
NEt2

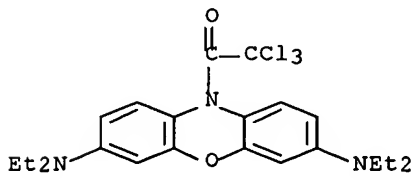
L4 ANSWER 45 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1985:195155 CAPLUS
DN 102:195155
TI Electrophotographic toner particles
PA Matsushita Electric Industrial Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 60017454	A2	19850129	JP 1983-125032	19830708
	JP 03052861	B4	19910813		
PRAI	JP 1983-125032		19830708		

AB A powder electrophotog. toner is composed of optically transparent particles contg. a sublimable color former and opaque particles which do not contain sublimable color formers. Thus, a dispersion contg. C. I. Pigment Red 5, C .I. Pigment Orange 21115, 3,7-bis(diethylamino)-10-trichloroacetylphenoxazine (I), butadiene-styrene copolymer, colloidal silica, and an anionic surfactant was spray dried to give red transparent particles. Sep. a dispersion contg. carbon black, butadiene-styrene copolymer, colloidal silica and an anionic surfactant was spray dried to give opaque black particles. The red and black particles were mixed, electrostatically coated on a ZnO type electrophotog. plate, imagewise exposed through a color original, developed, and the toners transferred on a receptor contg. an active clay (a color developer for I). The receptor was then heated and the toner particles removed to form clear red images on the receptor.

IT **67883-03-8**
RL: TEM (Technical or engineered material use); USES (Uses)
(electrophotog. toners contg., optical filter type)

RN 67883-03-8 CAPLUS
CN 10H-Phenoxazine-3,7-diamine, N,N,N',N'-tetraethyl-10-(trichloroacetyl)-(9CI) (CA INDEX NAME)

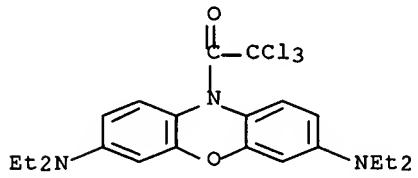


L4 ANSWER 46 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1985:176525 CAPLUS
DN 102:176525
TI Electrophotographic process
PA Matsushita Electric Industrial Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 60017767	A2	19850129	JP 1983-126413	19830711
PRAI JP 1983-126413		19830711		

AB A powder electrophotog. process is claimed in which electrostatically charged particles which are optically transparent and elec. conductive are coated on an uncharged electrophotog. plate, then the plate is imagewise exposed and developed by phys. removing the particles which are not electrostatically attracted to the plate. Particles having color-sepn. capability and contg. sublimable dye (or its precursor) are esp. useful. Charging of the particles instead of the electrophotog. plate reduces the effect resulting from optical refraction and scattering by the particles, and hence improves the image quality. Thus, a dispersion contg. styrene-butadiene rubber, silica, C.I. Pigment Red 5, C.I. Pigment Orange 21,115, and 3,7-bis(diethylamino)-10-trichloroacetylphenoxazine was spray dried to give red particles. Green and blue particles were also prepd. by using the same method and by using appropriate dyes and dye precursors. The color photog. images obtained by the above method and particles showed excellent color tone reprodn.

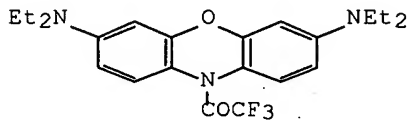
IT **67883-03-8**
RL: USES (Uses)
(electrophotog. color-sepn. filter type toners contg.)
RN 67883-03-8 CAPLUS
CN 10H-Phenoxazine-3,7-diamine, N,N,N',N'-tetraethyl-10-(trichloroacetyl)-(9CI) (CA INDEX NAME)



L4 ANSWER 47 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1985:158232 CAPLUS
DN 102:158232
TI Fubctional film laminates
PA Matsushita Electric Industrial Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 59131492	A2	19840728	JP 1983-6308	19830118
PRAI JP 1983-6308		19830118		

GI

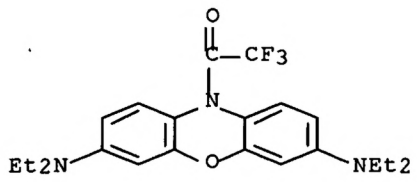


I

AB The title laminates have a functional thin film layer contg. a dye, a pigment, a color former, an electron acceptor, or an electron donor. The substrate may be a porous material and may be conductive or semiconductive. The laminates are for high speed recording or display. Dyes, color formers that give color by electron donors or acceptors, materials that fluoresce by electron beams, and thermochromic liq. crystals are used in prepg. the laminates. Thus, a poly(ethylene terephthalate) film was coated with a compn. prepd. from alumina particles 100, a 5% chloranil soln. in acetone 200 g, and a SBR latex to obtain a dye receptor sheet. A dye transfer sheet was prepd. by coating a CHCl3 soln. of dye I on thin paper. The 2 sheets were laid together and heat-treated at 130.degree. to produce cyan images having a d. of 1.0. Images obtained by a similar material but with alumina untreated with chloranil showed image d. 0.5.

IT **92313-09-2**
RL: USES (Uses)
(transfer sheet contg., for thermal recording materials contg. receptor sheet contg. chloranil-treated alumina)

RN 92313-09-2 CAPLUS
CN 10H-Phenoxazine, 3,7-bis(diethylamino)-10-(trifluoroacetyl)- (9CI) (CA INDEX NAME)


O
C—CF3
N
Et2N
O
NEt2

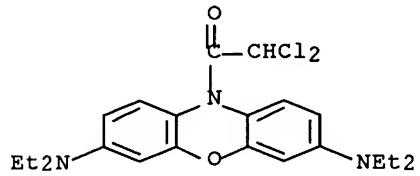
L4 ANSWER 48 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1985:157957 CAPLUS
DN 102:157957
TI Electrostatic color developer paper
PA Mitsui Toatsu Chemicals, Inc., Japan
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 59101652	A2	19840612	JP 1982-211378	19821203
PRAI JP 1982-211378		19821203		

AB The title paper has a coloring layer contg. a developer and an dielec. layer permeable to colorless sublimable dyes, and the developer is a nonsublimable quinone deriv. having .gtoreq.1 electron-attracting substituent(s). The paper is used in a one-shot color electrophotog. process, in which colored transparent beads contg. colorless sublimable dyes is electrostatically transferred to the developer paper in imagewise fashion, and the dyes are transferred to the paper by heat to form corresponding colored images. The use of the claimed paper provides high image d. Thus, a paper substrate was coated with a compn. contg. 2,5-dioctoxycarbonyl-3,6-dibromo-1,4-benzoquinone 5, CaCO3 100, colloidal silica (Syloid 72 from Fuji Davison) 10, and butadiene-styrene copolymer (Dow 636) 15. wt. parts and then with another compn. contg. low mol. wt. polyethylene (Peermarin PN from Sanyo Chem. Ind.) 100, colloidal silica 40, and butadiene-styrene copolymer (Dow 636). Colored beads [(1) green-colored, magenta dye-forming, contg. 4-(1,3,3-trimethylindolino)methyl-7-(N-methyl-N-phenyl)amino-1',3',3'-trimethylspiro[2H-1-benzopyran-2,2'-[2H]-indole], (2) red-colored, cyan dye-forming, contg. 3,7-bis(diethylamino)-10-dichloroacetylphenoxazine, bis(4-dimethylaminophenyl)methoxyethane] were imagewise transferred from a photoconductor plate to the developer paper electrostatically. Application of heat (200.degree., 10 s) rapidly formed colored image on the developer sheet.

IT **67883-02-7**
RL: USES (Uses)
(cyanine dye-forming electrostatog. toner contg., for multicolor image development on quinone deriv.-contg. paper)

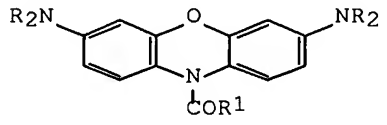
RN 67883-02-7 CAPLUS
CN 10H-Phenoxazine-3,7-diamine, 10-(dichloroacetyl)-N,N,N',N'-tetraethyl- (9CI) (CA INDEX NAME)



L4 ANSWER 49 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1985:140743 CAPLUS
DN 102:140743
TI Transparent particles for formation of color images by electrophotography
PA Matsushita Electric Industrial Co., Ltd., Japan; Hodogaya Chemical Co., Ltd.
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 59090865	A2	19840525	JP 1982-201459	19821116
PRAI	JP 1982-201459		19821116		

GI

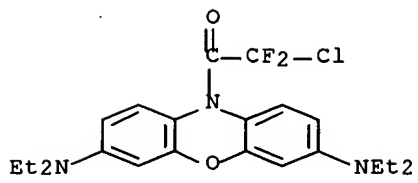


I

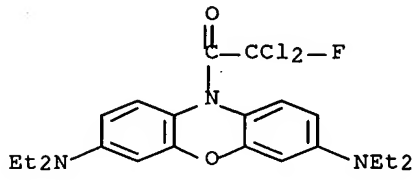
AB The title particles contain an acylleucophenoxazine deriv. (I; R = lower alkyl; R1 = F, fluorinated lower alkyl). The particles are mainly for hardcopying in color, and the additive is a sublimable color former that gives a cyan dye. The particles provide a high rate of color formation, low fog, high resoln., and a means of obtaining a color-sepd. cyan image without using a color filter. Thus, glass beads 1 kg were coated with a soln. of 3,7-bis(diethylamino)-10-fluorocarbonylphenoxazine 70 and butadiene-styrene copolymer 10 g in PhCl 1 kg to obtain colorless transparent beads. The beads were dusted on the surface of a charged ZnO photosensitive sheet, and imagewise exposed. The sheet was then inverted and vibrated, which removed the beads from the irradiated portions. The sheet was then laid on a resin paper sheet contg. p-phenylphenol, and heated at 180.degree. for 5 s, to obtain a clear cyan image having an image d. of 1.3 and a fog. d. of 0.1.

IT **92313-03-6 92313-04-7 92313-05-8**
92313-09-2
RL: USES (Uses)
(electrophotog. transparent toners contg., for cyan dye images)

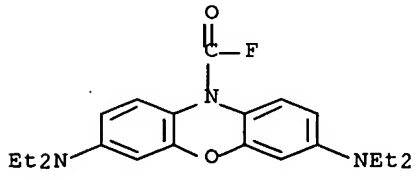
RN 92313-03-6 CAPLUS
CN 10H-Phenoxazine, 10-(chlorodifluoroacetyl)-3,7-bis(diethylamino)- (9CI) (CA INDEX NAME)



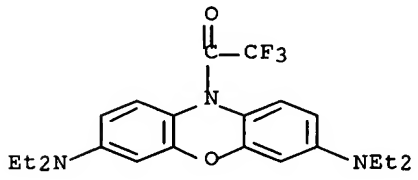
RN 92313-04-7 CAPLUS
CN 10H-Phenoxazine, 10-(dichlorofluoroacetyl)-3,7-bis(diethylamino)- (9CI) (CA INDEX NAME)



RN 92313-05-8 CAPLUS
CN 10H-Phenoxazine-10-carbonyl fluoride, 3,7-bis(diethylamino)- (9CI) (CA INDEX NAME)



RN 92313-09-2 CAPLUS
CN 10H-Phenoxazine, 3,7-bis(diethylamino)-10-(trifluoroacetyl)- (9CI) (CA INDEX NAME)



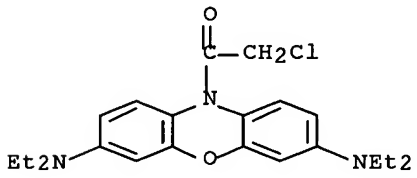
L4 ANSWER 50 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1985:36590 CAPLUS
DN 102:36590
TI Heat-developable silver halide photographic materials
PA Konishiroku Photo Industry Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 13 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 59005239	A2	19840112	JP 1982-112495	19820701
	JP 02041739	B4	19900919		
PRAI	JP 1982-112495		19820701		

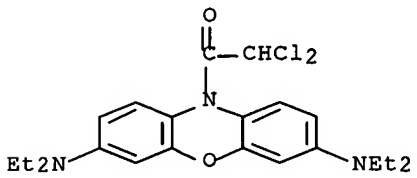
AB In a heat-developable photog. material in which a leuco dye functions as the principle developer and reduces Ag+ while being oxidized itself to form a dye, the above leuco dye is a sublimable material and forms a dye image in a receptor sheet.

IT **67307-49-7P 67883-02-7P 67883-03-8P**
67883-06-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and photothermog. applications of)

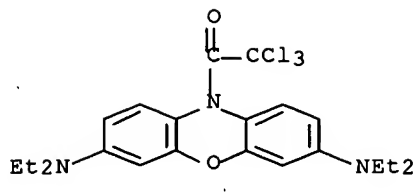
RN 67307-49-7 CAPLUS
CN 10H-Phenoxazine-3,7-diamine, 10-(chloroacetyl)-N,N,N',N'-tetraethyl-(9CI)
(CA INDEX NAME)



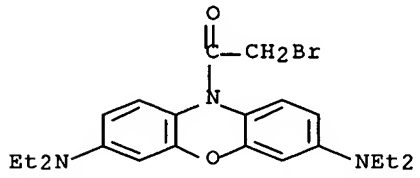
RN 67883-02-7 CAPLUS
CN 10H-Phenoxazine-3,7-diamine, 10-(dichloroacetyl)-N,N,N',N'-tetraethyl-(9CI) (CA INDEX NAME)



RN 67883-03-8 CAPLUS
CN 10H-Phenoxazine-3,7-diamine, N,N,N',N'-tetraethyl-10-(trichloroacetyl)-(9CI) (CA INDEX NAME)



RN 67883-06-1 CAPLUS
CN 10H-Phenoxazine-3,7-diamine, 10-(bromoacetyl)-N,N,N',N'-tetraethyl-(9CI)
(CA INDEX NAME)



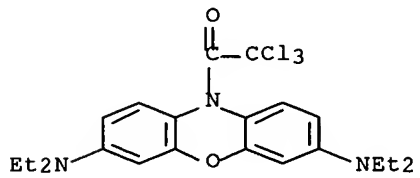
L4 ANSWER 51 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1985:15034 CAPLUS
DN 102:15034
TI Electrophotographic toner partricles
PA Matsushita Electric Industrial Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 59091450	A2	19840526	JP 1982-202754	19821117
	JP 04025538	B4	19920501		
PRAI	JP 1982-202754		19821117		

AB Optically transparent electrophotog. toner particles contg. a dye and a sublimable color former are not fixed on the electrophotog. image-forming part in its use, and are characterized by carrying the color former in an amorphous state. The particles have a high transparency and are esp. suited for copying processes in which the photoconductive body is 1st covered by the particles, imagewise exposed, and then freed from particles on the exposed area. The remaining particles are then transferred to a receptor contg. a color developer by using heat, which sublimes the color former to form images on the receptor. Thus, 3,7-bis(diethylamino)-10-trichloroacetylphenoxazine (a sublimable color former) 100 and Et cellulose 10 wt. parts were mixed as a soln. and dried. The toner particles were then formed by spray-drying a compn. contg. C.I. Pigment Red, C.I. Pigment Orange 2115 2, a butadiene-styrene rubber emulsion 38, colloidal silica 30, the above color former compn. 2.2, and an anionic surfactant 0.4 wt. part in water. The formed particles were then sprayed on the charged surface of a ZnO photoconductor to form an approx. monolayer, with 60% coverage. Exposure through a multicolored original and vibration removed the particles in the part of photoconductor exposed to red-contg. light. Photoconductor was placed on a receptor sheet contg. active clay and heated at 200.degree. for 4s to form a clear cyan image on the receptor after removal of particles from the surface.

IT **67883-03-8**
RL: USES (Uses)
(electrophotog. toner contg. color former from, for image formation on color developer-contg. receptor sheet)

RN 67883-03-8 CAPLUS
CN 10H-Phenoxazine-3,7-diamine, N,N,N',N'-tetraethyl-10-(trichloroacetyl)-(9CI) (CA INDEX NAME)



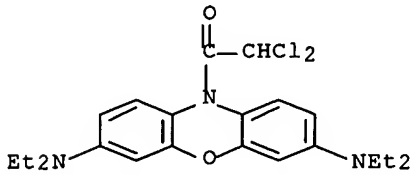
L4 ANSWER 52 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1984:638082 CAPLUS
DN 101:238082
TI Image receptor sheet for one shot color electrophotography
PA Mitsubishi Paper Mills, Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 58179845	A2	19831021	JP 1982-61770	19820415
	JP 04015939	B4	19920319		
PRAI	JP 1982-61770		19820415		

AB In a receptor sheet, which is obtained by forming on an electroconductive support a color developing layer contg. an electron acceptor material and optionally a colorless, transparent, and air-permeable dielec. layer, and capable of coloring a colorless, sublimable dye, the electron acceptor material used is a semisynthetic solid acid obtained by using a clay mineral with the regular tetrahedral layer structure of SiO2 and a SiO2 content of 82-96.5% (when dried at 105.degree. for 3 h) by acid treating the clay mineral, treating in an aq. medium with at least partially dissolved Mg and(or) Al compds., neutralizing with acid or base to incorporate Mg and(or) Al in the treated clay mineral, and drying. The receptor sheet is used in electrophotog. employing single exposure-single development 1-sheet color image formation.

IT **67883-02-7**
RL: USES (Uses)
(in color electrophotog. system with acid clay mineral receptor sheet)

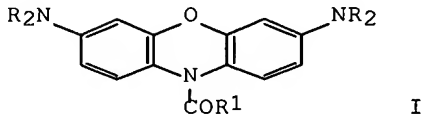
RN 67883-02-7 CAPLUS
CN 10H-Phenoxazine-3,7-diamine, 10-(dichloroacetyl)-N,N,N',N'-tetraethyl- (9CI) (CA INDEX NAME)



L4 ANSWER 53 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1984:553482 CAPLUS
DN 101:153482
TI Oxazine color formers
PA Hodogaya Chemical Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 59091151	A2	19840525	JP 1982-199773	19821116
PRAI JP 1982-199773		19821116		

GI

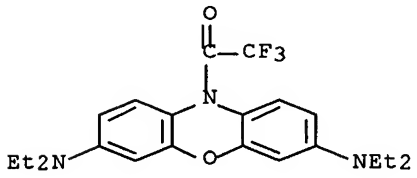


I

AB The title compds., forming a blue color with fast coloration speed in various recording processes, were prepd. having general formula I (R = lower alkyl; R1 = F, fluoroalkyl). Thus, 3,7-bis(diethylamino)phenoxazinium chloride zinc chloride [33273-26-6] was reduced with hydrosulfite and treated with trifluoroacetic anhydride [407-25-0] to obtain bluish white I (R = Et; R1 = CF3) [**92313-09-2**].

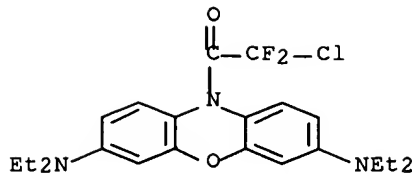
IT **92313-09-2**
RL: USES (Uses)
(color former, blue, for recording materials)

RN 92313-09-2 CAPLUS
CN 10H-Phenoxazine, 3,7-bis(diethylamino)-10-(trifluoroacetyl)- (9CI) (CA INDEX NAME)

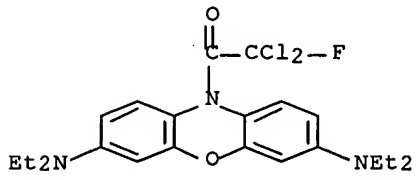


IT **92313-03-6 92313-04-7 92313-05-8**
92313-06-9 92313-07-0 92313-08-1
RL: USES (Uses)
(color formers, blue, for recording materials)

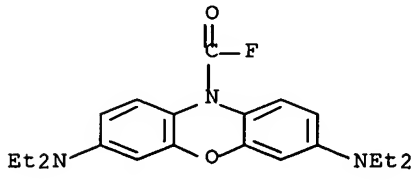
RN 92313-03-6 CAPLUS
CN 10H-Phenoxazine, 10-(chlorodifluoroacetyl)-3,7-bis(diethylamino)- (9CI) (CA INDEX NAME)



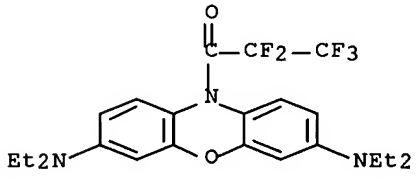
RN 92313-04-7 CAPLUS
CN 10H-Phenoxazine, 10-(dichlorofluoroacetyl)-3,7-bis(diethylamino)- (9CI) (CA INDEX NAME)



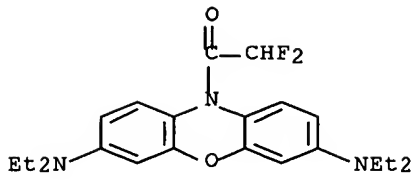
RN 92313-05-8 CAPLUS
CN 10H-Phenoxazine-10-carbonyl fluoride, 3,7-bis(diethylamino)- (9CI) (CA INDEX NAME)



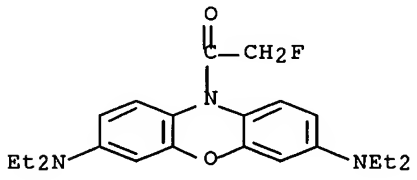
RN 92313-06-9 CAPLUS
CN 10H-Phenoxazine, 3,7-bis(diethylamino)-10-(2,2,3,3,3-pentafluoro-1-oxopropyl)- (9CI) (CA INDEX NAME)



RN 92313-07-0 CAPLUS
CN 10H-Phenoxazine, 3,7-bis(diethylamino)-10-(difluoroacetyl)- (9CI) (CA INDEX NAME)



RN 92313-08-1 CAPLUS
CN 10H-Phenoxazine, 3,7-bis(diethylamino)-10-(fluoroacetyl)- (9CI) (CA INDEX
NAME)



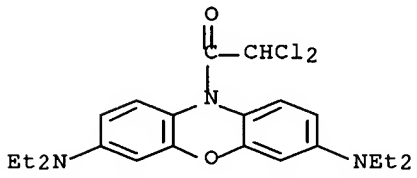
L4 ANSWER 54 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1984:445288 CAPLUS
DN 101:45288
TI Multicolor heat-sensitive recordings
PA Mitsubishi Paper Mills, Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 3 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 58102796	A2	19830618	JP 1981-203062	19811216
PRAI JP 1981-203062		19811216		

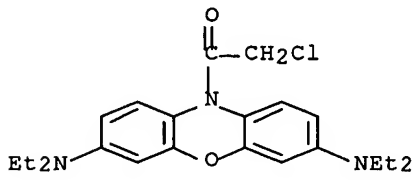
AB Multicolor heat-sensitive recording is effected by combining a transfer sheet obtained by forming on a 5-40 .mu. thick support a layer contg. a multiple no. of colorless heat-sublimable dyes having different subliming temp. and an image-receiving sheet obtained by forming on a support a layer contg. an acidic substance which forms color with the above colorless heat-sublimable dye and then heating at varied temps. from the transfer sheet side to provide multicolor images. The acidic substance may be an activated clay.

IT **67883-02-7**
RL: PROC (Process)
(multicolor heat-sensitive recording material with transfer sheet contg.)

RN 67883-02-7 CAPLUS
CN 10H-Phenoxazine-3,7-diamine, 10-(dichloroacetyl)-N,N,N',N'-tetraethyl- (9CI) (CA INDEX NAME)



L4 ANSWER 55 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1984:112114 CAPLUS
DN 100:112114
TI Color imaging process using filter beads
AU Takashima, Yuji; Ishida, Eisuke; Tsubusaki, Shigeru; Yubakami, Keiichi; Shimotsuma, Wataru
CS Cent. Res. Lab., Matsushita Electr. Ind. Co., Ltd., Osaka, 570, Japan
SO Denshi Shashin Gakkaishi (1983), 22(1), 17-29
CODEN: DSHGDD; ISSN: 0387-916X
DT Journal
LA Japanese
AB A color electrophotog. process is described in which only 1 cycle of charging, exposure, and development is required to reproduce full-color images. Filter beads (20-40 .mu.m diam.) contg. color formers are used to develop images formed on a ZnO panchromatic photoreceptor and the developed image is then transferred to an image receiving paper contg. an insulator layer and a color developer layer. The filter beads are composed of red-, green-, and blue-colored transparent melamine-HCHO polymer cores which work as a color sepn. filter. Each colored core is covered with an inner layer contg. a color former and an outer layer contg. CuI which makes the filter beads conductive. The above electrophotog. color reprodn. is based on a subtractive process, whereas the other 1-shot methods use an additive process. A color electrophotog. copy produced by the above process by using filter beads of 20-40 .mu.m diam. shows a resolving power of 4 lines/mm, a black d. of .apprx.1.2, and a background d. of 0.13.
IT **67307-49-7**
RL: USES (Uses)
(color electrophotog. with color-forming filter beads contg.)
RN 67307-49-7 CAPLUS
CN 10H-Phenoxazine-3,7-diamine, 10-(chloroacetyl)-N,N,N',N'-tetraethyl- (9CI)
(CA INDEX NAME)

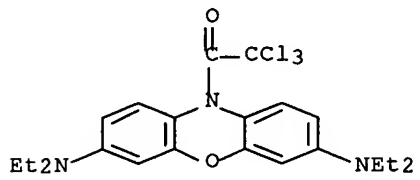


L4 ANSWER 56 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1983:135236 CAPLUS
DN 98:135236
TI Image forming process
IN Yubakami, Keiichi; Takashima, Yuji; Shimotsuma, Wataru
PA Matsushita Electric Industrial Co., Ltd. , Japan
SO Eur. Pat. Appl., 38 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 67443	A2	19821222	EP 1982-105217	19820615
	EP 67443	A3	19830316		
	EP 67443	B1	19850502		
	R: DE, FR, GB				
	JP 57207261	A2	19821218	JP 1981-93328	19810616
	JP 02045185	B4	19901008		
	CA 1163851	A1	19840320	CA 1982-405214	19820615
	US 4456669	A	19840626	US 1982-388732	19820615
PRAI	JP 1981-93328		19810616		

AB Image formation method (useful with electrog., electrophotog., and electrostatic recording) is described which comprises arranging the imaging particles contg. a dye former on a support in accordance with the image signals, and heat-transfer of the dye former to a receiver contg. a color developing agent. Thus, an electrostatic recording paper was imaged by an electrostatic pin applied with +3 kV voltage, contacted with particles formed from a compn. contg. styrene-butadiene copolymer 100, colloidal silica 50, Conductex SC 40, 4-(5-chloro-1,3,3-trimethylindolino)methylspiro[2H-1-benzopyrane-[2H]indole 5 wt. parts, heated for 0.5 s at 170.degree. (to evap. the dye former on the support), and the particles were removed by a felt blade soaked with a soln. of tartaric acid 1 wt.% in MeOH (the blade at the same time developed the areas contg. the dye former). Clear images of magenta color with Dmax .simeq. 1.9 were produced.

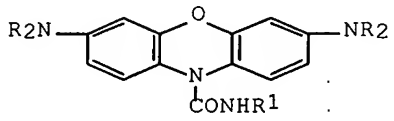
IT **67883-03-8**
RL: USES (Uses)
(imaging particles contg., for electrostatic latent image development)
RN 67883-03-8 CAPLUS
CN 10H-Phenoxazine-3,7-diamine, N,N,N',N'-tetraethyl-10-(trichloroacetyl)-(9CI) (CA INDEX NAME)



L4 ANSWER 57 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1982:583948 CAPLUS
DN 97:183948
TI Phenoxazine color formers
PA Hodogaya Chemical Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 57080454	A2	19820520	JP 1980-155163	19801106
	JP 63032103	B4	19880628		
PRAI	JP 1980-155163		19801106		

GI

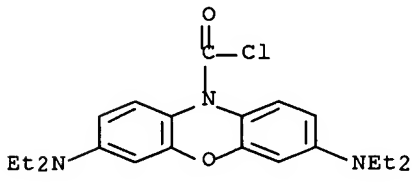


I

AB Phenoxazines I (R = lower alkyl; R1 = branched alkyl, cyclohexyl) were prepd. and they are useful as color formers in pressure-sensitive copying paper. For example, 3,7-bis(diethylamino)phenoxazinium chloride zinc chloride [33273-26-6] was treated with hydrosulfite in the presence of NaOH in toluene at 50-60.degree. to give 3,7-bis(diethylamino)phenoxazine [53342-54-4] which was phosgenated in toluene to give 3,7-bis(diethylamino)-10-(chloroformyl)phenoxazine (II) [**83531-24-2**]. II was treated with sec-butanamine [13952-84-6] in the presence of Et3N in THF to give I (R = Et; R1 = sec-Bu) [83531-20-8], deep blue on contact with clay.

IT **83531-24-2P**
RL: RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(manuf. and reactions with amines)

RN 83531-24-2 CAPLUS
CN 10H-Phenoxazine-10-carbonyl chloride, 3,7-bis(diethylamino)- (9CI) (CA INDEX NAME)



L4 ANSWER 58 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1982:226586 CAPLUS
DN 96:226586
TI Image forming particles
IN Yubakami, Keiichi; Takashima, Yuji
PA Matsushita Electric Industrial Co., Ltd. , Japan
SO Eur. Pat. Appl., 33 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 47006	A2	19820310	EP 1981-106769	19810829
	EP 47006	A3	19820421		
	EP 47006	B1	19850320		
	R: DE, FR, GB				
	JP 57046255	A2	19820316	JP 1980-122612	19800903
	JP 63045591	B4	19880909		
	CA 1166501	A1	19840501	CA 1981-385023	19810902
	US 4472490	A	19840918	US 1983-504247	19830617
PRAI	JP 1980-122612		19800903		
	US 1981-297170		19810828		

AB Transparent elec. conductive imaging particles for use in electrophotog. are described. Each particle has a cubic shape and consists of a thermoplastic resin, .gtoreq.1 colorless sublimable dye (which develops color through reaction with a color developer), and a coloring agent. The imaging particles provide excellent high purity color images. Thus, a soln. contg. Sumitex Resin M-3 100, curing accelerator 8, Methyl orange 2 and Aizen Rose Bengal B 2, and H2O 100 wt. parts was poured into cubic molds, and heated at 150.degree. for 1 min to give red cubic particles 100 wt. parts of which were mixed with 50 wt. parts of a soln. contg. a 3,7-bis(diethylamino)-10-trichloroacetylphenoxazine 10, Et cellulose 1, and dichloroethane 89 wt. parts, mixed with aq. soln. contg. ECR-34 90 and polyelectrolyte 4-th class ammonium salt 10 wt. parts, and spray-dried. The imaging compn. was prepd. by blending equal amts. of the red particles and green particles prepd. in the same manner (coloring agents Suminol Leveling Yellow NR and Kayacion Green A-4G, colorless dye 4-(5-chloro-1,3,3-trimethylindolino)methyl-7-(N-methyl-N-phenyl)amino-5'-chloro-1',3',3'-trimethylspiro[2H-1]-benzopyran[2H]indole]) and blue-purple particles prepd. in the same manner (coloring agent Acid Violet 6B, colorless dye N-(1,2-dimethyl-3-yl)methylidene-2,4-dimethoxyaniline). The mixt. was applied (in the dark) to a neg. charged ZnO plate and imagewise exposed 10 s with 500 W tungsten lamp. The plate was subjected to a slight vibration (to remove the particles from exposed areas) and then irradiated with white light (attenuation of the latent image). The image was electrostatically transferred to the clay layer face of the image receptor. The receptor paper was then heated from 180

to 250.degree. to give a pos. image.

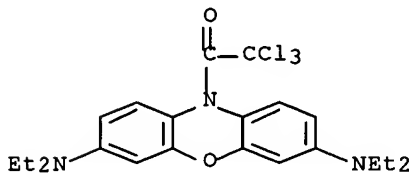
IT **67883-03-8**

RL: USES (Uses)

(color imaging particles contg., for electrophotog.)

RN 67883-03-8 CAPLUS

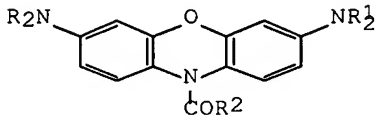
CN 10H-Phenoxazine-3,7-diamine, N,N,N',N'-tetraethyl-10-(trichloroacetyl)- (9CI) (CA INDEX NAME)



L4 ANSWER 59 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1980:559199 CAPLUS
DN 93:159199
TI Particles for forming color images in an electrophotographic process
PA Hodogaya Chemical Co., Ltd., Japan; Matsushita Electric Industrial Co., Ltd.
SO Brit., 12 pp.
CODEN: BRXXAA
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 1564093	A	19800402	GB 1978-18862	19780511
	JP 53144339	A2	19781215	JP 1977-59271	19770520
	JP 56002339	B4	19810119		
	US 4284696	A	19810818	US 1978-906120	19780515
PRAI	JP 1977-59271		19770520		

GI



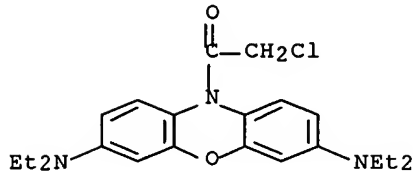
I

AB Light-transmitting particles for prodn. of color electrophotog. images without fogging or use of a color sepn. filter, and with good resoln. and reprodn. after one exposure and development, comprise .gtoreq.1 sublimable acyl leucophenoxazine dye (I; R, R1 = C1-2 alkyl; R2 = Ph, alkenyl, alkyl, or halogen-substituted alkyl) which produces a cyan color on heating in the presence of an electron acceptor, a carrier, and, optionally, a coloring agent. Thus, 70 g 3,7-bis(diethylamino)-10-crotonylphenoxazine and 10 g butadiene-styrene copolymer binder were dissolved in 1 kg PhCl and 1 kg glass beads were added and dried to give colorless transparent particles which were spread in a single layer over a charged ZnO photosensitive sheet. The sheet was imagewise exposed, vibrated to remove the irradiated particles, and a bottom paper sheet for a pressure-sensitive copying paper contg. p-PhC6H4OH was placed over the remaining particles and heated 7 s at 200.degree.. The bottom sheet was pulled off to give a clear cyan image with color d. 1.0 and 0 in the image and nonimage areas, resp.

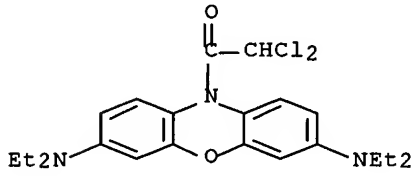
IT **67307-49-7 67883-02-7 67883-03-8**
RL: USES (Uses)
(sublimable dye, light-transmitting color electrophotog. particles coated with, for cyan images)

RN 67307-49-7 CAPLUS
CN 10H-Phenoxazine-3,7-diamine, 10-(chloroacetyl)-N,N,N',N'-tetraethyl- (9CI)

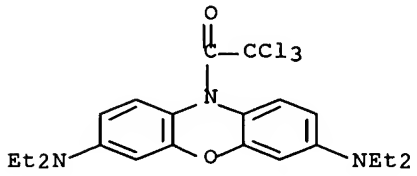
(CA INDEX NAME)



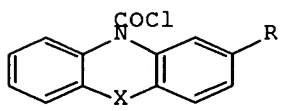
RN 67883-02-7 CAPLUS
CN 10H-Phenoxazine-3,7-diamine, 10-(dichloroacetyl)-N,N,N',N'-tetraethyl-(9CI) (CA INDEX NAME)

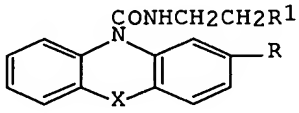


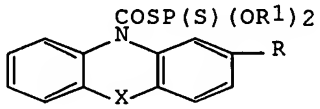
RN 67883-03-8 CAPLUS
CN 10H-Phenoxazine-3,7-diamine, N,N,N',N'-tetraethyl-10-(trichloroacetyl)-(9CI) (CA INDEX NAME)



L4 ANSWER 60 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1980:6484 CAPLUS
DN 92:6484
TI Phosphorylation of 10-(chlorocarbonyl)phenoxazine, 10-(chlorocarbonyl)phenothiazine, and their derivatives
AU Yarmukhametova, D. Kh.; Speranskaya, Z. G.
CS Inst. Org. Fiz. Khim. im. Arbuzova, Kazan, USSR
SO Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya (1979), (9), 2131-4
CODEN: IASKA6; ISSN: 0002-3353
DT Journal
LA Russian
GI

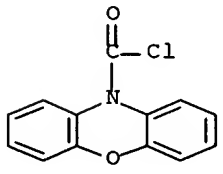


I


II


III

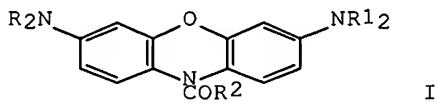
AB Treatment of I (X = O, R = H; X = S, R = H, Cl) with HOCH2CH2NH2 gave 63-93% II (R1 = OH), which were phosphorylated to give 70-84% II [R1 = OP(O)(OCH2CHMe2)2]. III (X = O, S; R = H, Cl; R1 = Ph, Pr, Et) were obtained in 50-100% yield by reaction of I with KSP(S)(OR1)2.
IT **38955-66-7**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with ethanolamine)
RN 38955-66-7 CAPLUS
CN 10H-Phenoxazine-10-carbonyl chloride (9CI) (CA INDEX NAME)



L4 ANSWER 61 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1978:555575 CAPLUS
DN 89:155575
TI Color electrophotographic photoconductor compositions
IN Ishida, Eisuke; Takashima, Yuji; Nishiguchi, Hisanori; Miyazawa, Yoshishige; Motohashi, Katsuichi
PA Matsushita Electric Industrial Co., Ltd., Japan; Hodogaya Chemical Co., Ltd.
SO Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 53042733	A2	19780418	JP 1976-117766	19760929
JP 55014427	B4	19800416		
PRAI JP 1976-117766		19760929		

GI

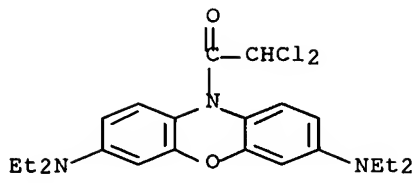


I

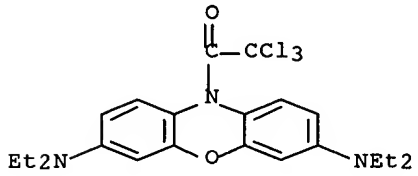
AB Color electrophotog. photoconductor compns. contain a photoconductor and an acylleucophenoxazine deriv. (I; R, R1 = lower alkyl; R2 = Ph, alkenyl, alkyl, haloalkyl). The acylleucophenoxazine deriv. yields cyan images having good color clarity upon reaction with an acidic substance. Thus, CdS 1000, 3,7-bis(diethylamino)-10-crotonoylphenoxazine 50, an acrylic resin 200, and PhMe 1000 kg were mixed and spray-dried to give a photoconductor compn. The photoconductor compn. was spread on an Al support, charged, imagewise exposed, developed with an air blast, and an acidic clay-coated receptor sheet was hot-pressed on the photoconductor layer at 190.degree. for 5 s to give cyan images on the receptor sheet. The resoln., color d., stimulus value, .lambda.max, and tone were 10 lines/mm, 0.85, 60%, 483 nm, and 7 steps, resp.

IT **67883-02-7 67883-03-8**
RL: USES (Uses)
(photoconductor compn. contg. cadmium sulfide and, for electrophotog. materials for cyan image formation)

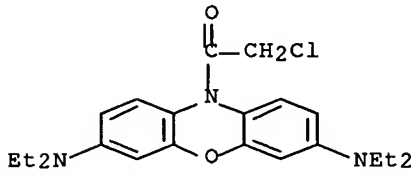
RN 67883-02-7 CAPLUS
CN 10H-Phenoxazine-3,7-diamine, 10-(dichloroacetyl)-N,N,N',N'-tetraethyl- (9CI) (CA INDEX NAME)



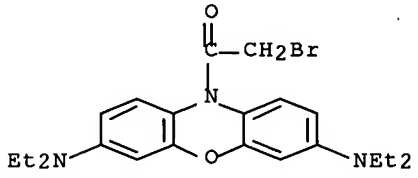
RN 67883-03-8 CAPLUS
CN 10H-Phenoxazine-3,7-diamine, N,N,N',N'-tetraethyl-10-(trichloroacetyl)-(9CI) (CA INDEX NAME)



IT **67307-49-7P 67883-06-1P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
RN 67307-49-7 CAPLUS
CN 10H-Phenoxazine-3,7-diamine, 10-(chloroacetyl)-N,N,N',N'-tetraethyl-(9CI)
(CA INDEX NAME)



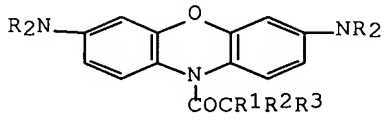
RN 67883-06-1 CAPLUS
CN 10H-Phenoxazine-3,7-diamine, 10-(bromoacetyl)-N,N,N',N'-tetraethyl-(9CI)
(CA INDEX NAME)



L4 ANSWER 62 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1978:512406 CAPLUS
DN 89:112406
TI 3,7-Bis(dialkylamino)-10-haloacetylphenoxazine derivatives
IN Miyazawa, Yoshihide; Motohashi, Katsuichi
PA Hodogaya Chemical Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 53041323	A2	19780414	JP 1976-116000	19760929
	JP 53043532	B4	19781121		
PRAI	JP 1976-116000		19760929		

GI

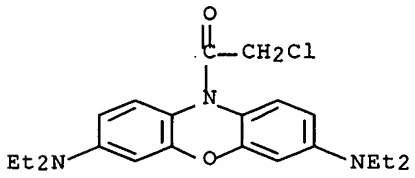


I

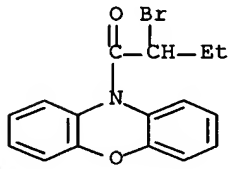
AB I (R = lower alkyl, R1 = Cl, Br, R2, R3 = H, Cl, Br), forming deep blue colors on contact with acidic materials, were prepd. and useful as color formers in copying paper. For example, 3,7-bis(diethylamino)phenoxazine [53342-54-4] in PhMe was teated with ClCH2COCl [79-04-9] to give I (R = Et, R1 = Cl, R2 = R3 = H) [**67307-49-7**].

IT **67307-49-7P**
RL: PREP (Preparation)
(color formers, manuf. of)

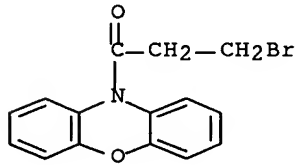
RN 67307-49-7 CAPLUS
CN 10H-Phenoxazine-3,7-diamine, 10-(chloroacetyl)-N,N,N',N'-tetraethyl- (9CI)
(CA INDEX NAME)



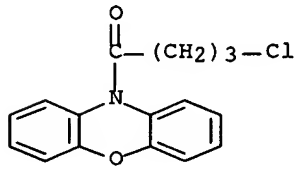
L4 ANSWER 63 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1976:4884 CAPLUS
DN 84:4884
TI Phosphorylation of 10-(haloacyl)phenoxazines and 10-(.beta.-bromopropionyl)phenothiazine
AU Yarmukhametova, D. Kh.; Speranskaya, Z. G.
CS Inst. Org. Fiz. Khim. im. Arbuzova, Kazan, USSR
SO Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya (1975), (9), 2064-7
CODEN: IASKA6; ISSN: 0002-3353
DT Journal
LA Russian
GI For diagram(s), see printed CA Issue.
AB Phenoxazine derivs. I (R = C1-4 n-alkyl, R1 = H, Et, n = 1,2) were obtained in 60-94% yields by boiling II (X = Br, Cl) with (RO)2P(S)SK in dry Me2CO 6 hr. Also prepd. was 94% III.
IT **57779-04-1 57779-05-2 57779-06-3**
RL: RCT (Reactant); RACT (Reactant or reagent)
(phosphorylation of, by potassium O,O-dialkyl phosphoryldithioates)
RN 57779-04-1 CAPLUS
CN 10H-Phenoxazine, 10-(2-bromo-1-oxobutyl)- (9CI) (CA INDEX NAME)



RN 57779-05-2 CAPLUS
CN 10H-Phenoxazine, 10-(3-bromo-1-oxopropyl)- (9CI) (CA INDEX NAME)



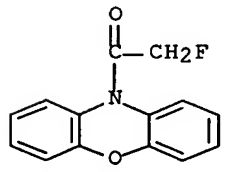
RN 57779-06-3 CAPLUS
CN 10H-Phenoxazine, 10-(4-chloro-1-oxobutyl)- (9CI) (CA INDEX NAME)



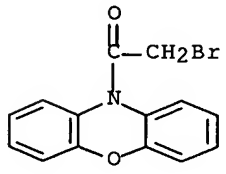
L4 ANSWER 64 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1975:593345 CAPLUS
DN 83:193345
TI N-(Haloacetyl)phenoxazines
IN Suzuki, Atsuo; Ichihara, Shigehiro; Niki, Takao; Shimogo, Kazuo; Ogata, Kazuo
PA Teijin Ltd., Japan
SO Jpn. Tokkyo Koho, 3 pp.
CODEN: JAXXAD
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 50005194	B4	19750228	JP 1970-6423	19700124
PRAI JP 1970-6423		19700124		

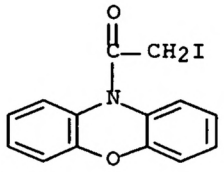
GI For diagram(s), see printed CA Issue.
AB N-(Haloacetyl)phenoxazines I (X = F, Br, iodine) were prepd. by acylating phenoxazine with haloacetyl halides XCH2COR (R = halo) or anhydrides (XCH2CO)2O. I were effective against sarcoma 180 in mice. Thus, 10 g phenoxazine was refluxed with 8 g FCH2COCl in 100 ml C6H6 for 2 hr to give 10.8 g I (X = F). Also prepd. were I where X = Br or iodine.
IT **43170-46-3P 43170-48-5P 56745-00-7P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(prepn. and antitumor activity of)
RN 43170-46-3 CAPLUS
CN 10H-Phenoxazine, 10-(fluoroacetyl)- (9CI) (CA INDEX NAME)



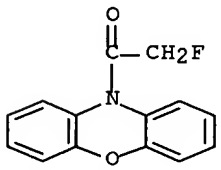
RN 43170-48-5 CAPLUS
CN 10H-Phenoxazine, 10-(bromoacetyl)- (9CI) (CA INDEX NAME)



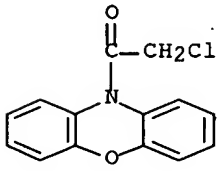
RN 56745-00-7 CAPLUS
CN 10H-Phenoxazine, 10-(iodoacetyl)- (9CI) (CA INDEX NAME)


O
C
CH2I
N
O

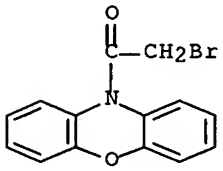
L4 ANSWER 65 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1974:10266 CAPLUS
DN 80:10266
TI Antitumor activity of haloacetylcarbazole derivatives
AU Kanzawa, Fumihiko; Hoshi, Akio; Ohmine, Mihoko; Kuretani, Kazuo
CS Pharmacol. Div., Natl. Cancer Cent. Res. Inst., Tokyo, Japan
SO Gann (1973), 64(4), 391-6
CODEN: GANNA2; ISSN: 0016-450X
DT Journal
LA English
AB Of 22 haloacetyl derivs. tested, bromoacetylcarbazole (I) [38002-60-7] and iodoacetylcarbazole(II) [43170-45-2] were the most active inhibitors of ascites sarcoma 180 in mice. These 2 compds. were active even at approx. 3 mg/kg/day. Chloroacetylcarbazole [38002-61-8] was active at over 50 mg/kg/day but fluoroacetylcarbazole [2643-21-2] was toxic, 1 of 6 mice dying from 15 mg/kg/day. Phenoxazine derivs. were active, but the relative potency of the most active bromo deriv. was approx. one-tenth that of I. Iminodibenzyl and acridine derivs. had relative potencies almost one-fifth that of the corresponding carbazole derivs. Tetrahydrocarbazole derivs. were active but weaker than the orig. carbazole derivs. Chloroacetyldiphenylamine [5428-43-3] was inactive. Of the bicyclic derivs. examined, bromoacetylcarbazole and bromoacetylbenzimidazole [43170-63-4] were weakly active.
IT **43170-46-3 43170-47-4 43170-48-5**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(neoplasm inhibitor)
RN 43170-46-3 CAPLUS
CN 10H-Phenoxazine, 10-(fluoroacetyl)- (9CI) (CA INDEX NAME)



RN 43170-47-4 CAPLUS
CN 10H-Phenoxazine, 10-(chloroacetyl)- (9CI) (CA INDEX NAME)



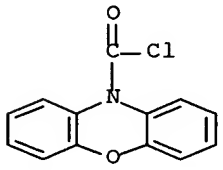
RN 43170-48-5 CAPLUS
CN 10H-Phenoxazine, 10-(bromoacetyl)- (9CI) (CA INDEX NAME)



L4 ANSWER 66 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1973:526512 CAPLUS
DN 79:126512
TI Substituted thiolcarbamidic acid alkyl esters
IN Sirrenberg, Walther; Bauer, Rudolf; Schulz, Werner; Banholzer, Rolf
PA Boehringer Ingelheim G.m.b.H.
SO S. African, 31 pp.
CODEN: SFXXAB
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	ZA 7202027		19720929		
	AT 315193			AT	
	DE 2114893			DE	
	FR 2132085			FR	
	GB 1380825			GB	
	US 3905957		19750000	US	
PRAI	DE 1971-2114893		19710327		

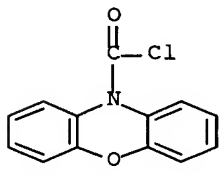
GI For diagram(s), see printed CA Issue.
AB The title compds. (I, X = CH2CH2, CH:CH, S, O; R = Me, Et, Me2CH) and their bromomethylates were prepd. Thus, 10,11-dihydro-5H-dibenz[b,f]azepine-5-carbonyl chloride was treated with HSCH2CH2NEtCHMe2 in Et3N and PhMe to give I (X = CH2CH2, R = Et). I have spasmolytic activity.
IT **38955-66-7**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with (diisopropylamino)ethanethiol)
RN 38955-66-7 CAPLUS
CN 10H-Phenoxazine-10-carbonyl chloride (9CI) (CA INDEX NAME)



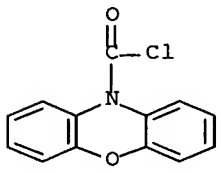
L4 ANSWER 67 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1973:97716 CAPLUS
DN 78:97716
TI Phosphorylated N-formylphenoxazine derivatives
IN Yarmukhametova, D. Kh.; Speranskaya, Z. G.
PA Arbuzov, A. E., Institute of Organic and Physical Chemistry
SO U.S.S.R.
From: Otkrytiya, Izobret., Prom. Obraztsy, Tovarnye Znaki 1972, 49(29), 57.
CODEN: URXXAF
DT Patent
LA Russian
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
SU 352907		19720929	SU	19701214

GI For diagram(s), see printed CA Issue.
AB The title compds. (I; R = alkyl) were prepd. by treating N-(chloroformyl)phenoxazine with the resp. P(OR)3 at 130-50.degree..
IT **38955-66-7**
RL: RCT (Reactant); RACT (Reactant or reagent)
(phosphorylation of)
RN 38955-66-7 CAPLUS
CN 10H-Phenoxazine-10-carbonyl chloride (9CI) (CA INDEX NAME)



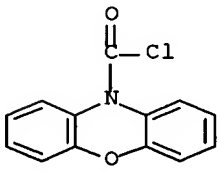
L4 ANSWER 68 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1973:58334 CAPLUS
DN 78:58334
TI 10-(O,O-Dialkylphosphonoformyl)phenoxazines and phenothiazines
AU Yarmukhametova, D. Kh.; Speranskaya, Z. G.; Kudryavtsev, B. V.
CS Inst. Org. Fiz. Khim. im. Arbuzova, Kazan, USSR
SO Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya (1972), (11), 2624-5
CODEN: IASKA6; ISSN: 0002-3353
DT Journal
LA Russian
GI For diagram(s), see printed CA Issue.
AB Reaction of P(OR)3 at 130-50.degree. with 10-(chloroformyl)phenoxazine or
-phenothiazine (I) gave (II) (Q = O, S; R = Me, Et, Pr, iso-Pr, Bu). These had low toxicity (ca. 1000 mg/kg for LD50) to warmblooded animals but the anthelmintic activity of the phenothiazine derivs. was lower than
that for the corresponding dialkylphosphonoacetyl derivs. described earlier (1969). The anticholinesterase properties of both types were similar with ED50 of 10-4-10-5 mole.
IT **38955-66-7**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with trialkyl phosphites)
RN 38955-66-7 CAPLUS
CN 10H-Phenoxazine-10-carbonyl chloride (9CI) (CA INDEX NAME)



L4 ANSWER 69 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1972:564725 CAPLUS
DN 77:164725
TI Spasmolytic heterocyclic S-alkyl thiocarbamates
IN Sittenberg, Walter; Bauer, Rudolf; Schulz, Werner; Banholzer, Rolf
PA Boehringer, C. H., Sohn
SO Ger. Offen., 20 pp. Addn. to Ger. 2,023,638.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2144893	A1	19730315	DE 1971-2144893	19710908
	DE 2144893	B2	19741121		
	GB 1406071	A	19750910	GB 1972-39300	19720823
	NL 7212116	A	19730312	NL 1972-12116	19720906
	IT 965232	A	19740131	IT 1972-52574	19720906
	FR 2152189	A5	19730420	FR 1972-31760	19720907
	AU 7246413	A1	19740314	AU 1972-46413	19720907
	CA 960638	A1	19750107	CA 1972-151135	19720907
	SE 383557	B	19760315	SE 1972-11547	19720907
	BE 788544	A1	19730102	BE 1972-121786	19720908
	US 3830251	A	19740820	US 1972-287544	19720908
PRAI	DE 1971-2144893		19710908		

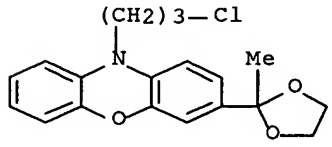
GI For diagram(s), see printed CA Issue.
AB Addn. to Ger. 2,023,638. Eight thiocarbamates (I, Q = CH2-CH2, S, O, CH:CH; R = Et, Me2CH, Me) and (or) their HCl or MeBr salts, useful as spasmolytic agents, were prepd. Thus, refluxing the chloride II, HSCH2CH2N(CHMe2)Et, and Et3N in PhMe under N for 3 hr gave 88.6 I (Q = CH2CH2, R = Et).
IT **38955-66-7**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with (dialkylamino)ethanethiol)
RN 38955-66-7 CAPLUS
CN 10H-Phenoxazine-10-carbonyl chloride (9CI) (CA INDEX NAME)



L4 ANSWER 70 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1964:82892 CAPLUS
DN 60:82892
OREF 60:14515a-c
TI New phenoxazine derivatives
PA C. F. Boehringer & Soehne G.m.b.H.
SO 10 pp.
DT Patent
LA Unavailable

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	BE 631192		19631104	BE	
	FR 1355188			FR	
	GB 965738			GB	
PRAI	DE		19620418		

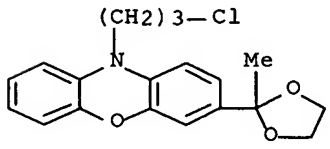
GI For diagram(s), see printed CA Issue.
AB To a suspension of 7 g. $NaNH_2$ in 500 ml. liquid NH_3 was slowly added 27 g.
2-acetylphenoxazine ethylene acetal suspended in 200 ml. Et_2O, the mixt. stirred 2 hrs., treated with 17 g. $Cl(CH_2)_3Br$, stirring continued 4 hrs.,
200 ml. Et_2O added, and the NH_3 allowed to evap. to give 18.6 g. I (R = Cl) (Ia), m. 78-80.degree.. Treatment of 18.6 g. Ia with 5.5 g. 4-hydroxypiperidine, 7 g. K_2CO_3, 0.5 g. NaI, and 15 ml. butanone and refluxing the mixt. 10 hrs. gave 18.3 g. I (R = 4-hydroxypiperidino), m. 107-8.degree., which was hydrolyzed by keeping with N HCl 2 hrs., then basifying to give 14.7 g. II, m. 164-5.degree. (MeOH); HCl salt m. 239-41.degree. (EtOH). Subcutaneous L.D.50 of II in mice was 465 mg./kg.
II showed tranquilizing and neuroleptic properties. Cf. preceding abstr.
IT **99688-87-6**, Ketone, 10-(3-chloropropyl)phenoxazin-3-yl methyl, cyclic ethylene acetal
(prepn. of)
RN 99688-87-6 CAPLUS
CN Ketone, 10-(3-chloropropyl)phenoxazin-3-yl methyl, cyclic ethylene acetal
(7CI) (CA INDEX NAME)



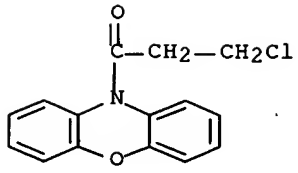
L4 ANSWER 71 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1964:82891 CAPLUS
DN 60:82891
OREF 60:14514f-h,14515a
TI New basic derivatives of phenoxazine
PA C. F. Boehringer & Soehne G.m.b.H.
SO 10 pp.
DT Patent
LA Unavailable

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	BE 631122		19631104	BE	
	FR 1355946			FR	
	GB 968182			GB	
PRAI	DE		19620417		

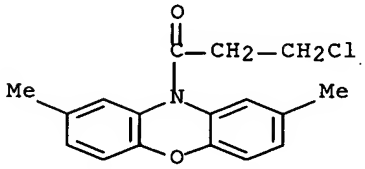
GI For diagram(s), see printed CA Issue.
AB A mixt. of 25.9 g. 10-(3-chloropropyl)-phenoxazine, 13 g. K2CO3, 1 g.NaI, 15.2 g. 4-(2-hydroxyethyl)piperidine (I), and 250 ml. Et2CO was refluxed 10 hrs., filtered, the solid washed with Et2CO, and the combined filtrates evapd. in vacuo to give II (R = H), m. 109-10.degree. (MeOH); HCl salt m. 150-2.degree.. To a suspension of 7 g. NaNH2 in 500 ml. liquid NH3 was slowly added 27 g. 2-acetylphenoxazine ethylene ketal suspended in 200 ml. Et2O. After 2 hrs. stirring, 17 g. Cl(CH2)3Br was added, stirring continued 4 hrs., 200 ml. Et2O added, NH3 allowed to evap., and the Et2O soln. worked up to give 18.6 g. III, m. 78-80.degree. (Et2O-ligroine). From 18.6 g. III and 6.5 g. I was prepd. 20 g. of the ethylene acetal of II (R = Ac), m. 114-15.degree. (MeOH), which after treatment with N HCl 1 hr. and basification gave 16.4 g. II (R = Ac), m. 117-18.degree. (MeOH); HCl salt m. 215.degree.. II (R = H) and II (R = Ac) had sedative and neuroleptic properties. Subcutaneous L.D.50 of II (R = Ac) in mice was 500 mg./kg. Pharmacol. tests were described. Cf. following abstr.
IT **99688-87-6**, Ketone, 10-(3-chloropropyl)phenoxazin-3-yl methyl, cyclic ethylene acetal
(prepn. of)
RN 99688-87-6 CAPLUS
CN Ketone, 10-(3-chloropropyl)phenoxazin-3-yl methyl, cyclic ethylene acetal
(7CI) (CA INDEX NAME)



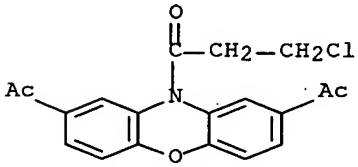
L4 ANSWER 72 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1964:45699 CAPLUS
DN 60:45699
OREF 60:8022g-h,8023a-b
TI Preparation of 2,8-disubstituted phenoxazines
AU de Antoni, Jacques
CS Fac. Med., Paris
SO Bulletin de la Societe Chimique de France (1963), (12), 2874-7
CODEN: BSCFAS; ISSN: 0037-8968
DT Journal
LA Unavailable
GI For diagram(s), see printed CA Issue.
AB 2,8-Dimethylphenoxazine with Ac2O and NaOAc gave 99% N-Ac deriv. (I), m. 110.degree.. I (25.3 g.) in 253 ml. C5H5N and 253 ml. H2O stirred at 70-5.degree. in a current of CO2 and treated in 5 portions with 118.5 g. KMnO4 yielded 76.4% 10-acetylphenoxazine-2,8-dicarboxylic acid (II), m. 325-6.degree. (Me2NCHO). Other procedures gave low yields. II was sapond, to phenoxazine-2,8-dicarboxylic acid (III), subliming at 350-60.degree. (EtOH); di-Me ester m. 294-6.degree.; di-Et ester m. 234.degree. (EtOAc). II with PCl5 in CCl4 gave 88.5% diacid chloride (IV), m. 168.degree. (C6H6). IV With NH3 in C6H6 gave 83% diamide, m. 326-8.degree. (C6H6), which with HCl-EtOH gave 68% phenoxazine-2,8-dicarboxylic acid amide, m. 353-5.degree.. IV with Me2NH in C6H6 yielded 86% bis(dimethylamide), m. 216.degree. (MeOH), which was deacetylated to 84% phenoxazine-2,8-dicarboxylic acid bis(dimethylamide), m. 178.degree. (Me2CO). 2,8-Diethylphenoxazine gave the N-Ac deriv., oil, which with KMnO4 under CO2 as above yielded 68.5% 2,8,10-triacetylphenoxazine (V), m. 167.degree. (EtOH), also prepd. by Friedel-Crafts reaction of 10-acetylphenoxazine. V with KOHEtOH gave 91.5% 2,8-diacetylphenoxazine, m. 258-60.degree. (disemicarbazone m. 355.degree.), which was reduced with KBH4 in tetrahydrofuran to 92.5% 2,8-bis(1-hydroxyethyl)phenoxazine, m. 142.degree. (C6H6). V with iodine in C5H5N yielded the pyridinium salt (Va), which with 0.5N NaOH gave 62% III. Substituted phenoxazines and Cl(CH2)2COCl gave the following VI (R' = Cl) (R, % yield, and m.p. given): H, 89, 131.degree.; Me, 91, 174.degree.; Me2NCO, 59, 180.degree.; Ac, 65, 193.degree.. These were converted into VI (R' = N-methylpiperazino) (R, % yield, and m.p. of base and hydrochloride given): H, 77, 112.degree. 204.degree.; Me, 82, 114.degree., 196.degree.; Me2NCO, 75, 70-2.degree., 176.degree.; Ac, 75, 89-91.degree., 183-5.degree..
IT **92433-61-9**, Phenoxazine, 10-(3-chloropropionyl)-
93313-47-4, Phenoxazine, 10-(3-chloropropionyl)-2,8-dimethyl-
94257-68-8, Phenoxazine, 2,8-diacetyl-10-(3-chloropropionyl)-
95697-87-3, Phenoxazine-2,8-dicarboxamide, 10-(3-chloropropionyl)-N,N,N',N'-tetramethyl-
(prepn. of)
RN 92433-61-9 CAPLUS
CN 10H-Phenoxazine, 10-(3-chloro-1-oxopropyl)- (9CI) (CA INDEX NAME)



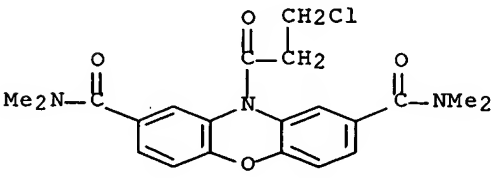
RN 93313-47-4 CAPLUS
CN Phenoxazine, 10-(3-chloropropionyl)-2,8-dimethyl- (7CI) (CA INDEX NAME)



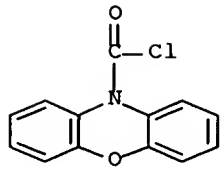
RN 94257-68-8 CAPLUS
CN Phenoxazine, 2,8-diacetyl-10-(3-chloropropionyl)- (7CI) (CA INDEX NAME)



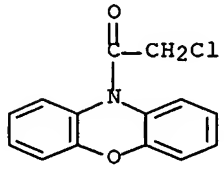
RN 95697-87-3 CAPLUS
CN Phenoxazine-2,8-dicarboxamide, 10-(3-chloropropionyl)-N,N,N',N'-tetramethyl- (7CI) (CA INDEX NAME)



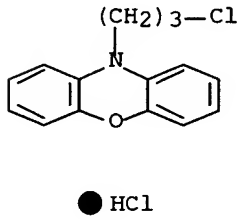
L4 ANSWER 73 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1964:9753 CAPLUS
DN 60:9753
OREF 60:1738d-g
TI Nitrogen substituted phenoxazines
AU Gal, Andrew E.; Avakian, Souren
CS Richardson-Merrill Inc., Philadelphia, PA
SO Journal of Medicinal Chemistry (1963), 6(6), 809-11
CODEN: JMCMAR; ISSN: 0022-2623
DT Journal
LA Unavailable
GI For diagram(s), see printed CA Issue.
AB The reaction of I [R =ClCH2CH2CH2 (II)] with secondary amines produced the corresponding tertiary amines. Thus, 10 g. II, 15 g. (CH2:CHCH2)2NH, 0.5 g. Cu powder, and 100 ml. PhMe kept 16 hrs. at room temp., the mixt. refluxed 48 hrs., evapd. in vacuo, the residue basified (10% NaOH), and the free base extd. (Et2O) and distd. afforded I [R = (CH2:CHCH2)2NCH2CH2CH2], b1 180-2.degree.; HCl salt m. 95-6.degree.. Similarly prepd. were I [R = 3-[4-(2-hydroxyethyl)-1-piperazinyl]propyl], m. 106-7.degree., and I (R = 3-[(2-morpholinoethyl)amino]propyl); dihydrochloride m. 209-11.degree.. The alkylation of I (R = H) in liquid NH3 contg. NaNH2 with (CH2:CHCH2)2NCOCH2Cl gave 56.5% I (R = CH2:CHCH2)2NCOCH2, m. 144-7.degree. (EtOH), and similar alkylations of 2-acetylphenoxazine with Me2NCH2CH2Cl and Me2NCH2CH2CH2Cl produced 2 - acetyl - 10 - [2 - (dimethylamino)ethyl]phenoxazine; HCl salt m. 232-4.degree., and 2-acetyl-10-[3-(dimethylamino)propyl]phenoxyazine; HCl salt m. 246-7.degree., resp. The condensation of amines with I (R = ClCH2CO) and I (R = ClCHMeCO) gave the following I (R, m.p. of HCl salt, and m.p. of methiodide given): 1-pyrrolidinylacetyl (III), 182-3.degree., 218-19.degree.; Me2NCHMeCO (IV), 216-17.degree. 221-2.degree.; 2-(1-pyrrolidinyl)propionyl, 204-5.degree., -(methobromide m. 228-9.degree.). 2-Acetyl-10-[2-(dimethylamino)propionyl]phenoxazine; hydrochloride m. 140-1.degree., was similarly prepd. I (R = CO2Et), m. 74-5.degree., I (R = CO2CH2CH2N(iso-Pr)2).HCl, m. 167-9.degree., and I (R = CONHNH2), m. 156-7.degree., were prepd. from I (R = COCl), m. 142-3.degree.. III IV, and IV.MeI had generally weak anticholinergic and spasmolytic properties, and were short acting hypotensives.
IT **38955-66-7**, Phenoxazine-10-carbonyl chloride **43170-47-4**, Phenoxazine, 10-(chloroacetyl)- **92425-83-7**, Phenoxazine, 10-(3-chloropropyl)-, hydrochloride **92433-60-8**, Phenoxazine, 10-(2-chloropropionyl)-
(prepn. of)
RN 38955-66-7 CAPLUS
CN 10H-Phenoxazine-10-carbonyl chloride (9CI) (CA INDEX NAME)



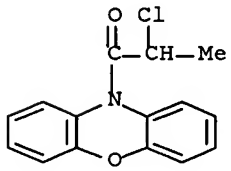
RN 43170-47-4 CAPLUS
CN 10H-Phenoxazine, 10-(chloroacetyl)- (9CI) (CA INDEX NAME)



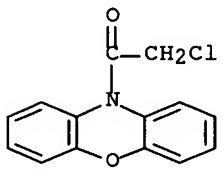
RN 92425-83-7 CAPLUS
CN Phenoxazine, 10-(3-chloropropyl)-, hydrochloride (7CI) (CA INDEX NAME)



RN 92433-60-8 CAPLUS
CN Phenoxazine, 10-(2-chloropropionyl)- (7CI) (CA INDEX NAME)



L4 ANSWER 74 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1964:4554 CAPLUS
DN 60:4554
OREF 60:836d-e
TI Radioprotective action of phenoxazine derivatives
AU Benevolenskii, V. N.; Zhuravlev, A. I.
SO Radiobiologiya (1963), 3(5), 745-8
CODEN: RADOA8; ISSN: 0033-8192
DT Journal
LA Unavailable
AB The radioprotective and antioxidative action of 21 substances including 19 derivs. of phenoxazine (I) was studied. The tested substance (1 ml. of alc. soln.) was added to the cells of Saccharomyces vini suspended in phosphate buffer (pH 7.0, 400-500 cells/ml.). The resulting concn. of the test substance was 10-5 or 10-8 moles/ml. After 15-30 min. the suspension was irradiated with .gamma.-rays (50 kr.). .beta.-Mercaptoethylurea, I, and 1-chloroacetylaminophenoxazine had a radioprotective effect, slightly lower than that of cysteine. The antioxidative effect was studied in oleic acid (II) and neutral oils (III) (olive and sunflower oils). The tested substance (10-5 moles/g.) was added to II or III and the mixt. was oxidized in air in darkness at 40.degree. for 5 and 10 days resp. The oxidn. of III was accelerated with 60Co .gamma.-irradiation (7 .times. 105 r.). The test substances were divided into 3 groups according to their antioxidative effect: (1) the substances suppressing the oxidn. of II and III; (2) the substances suppressing the oxidn. of II and catalyzing the oxidn. of III; (3) the substances catalyzing the oxidn. of II and III. With the exception of I the substances with radioprotective effects belonged to group (1).
IT **43170-47-4**, Phenoxazine, 10-(chloroacetyl)-
(radiation-damage prevention by)
RN 43170-47-4 CAPLUS
CN 10H-Phenoxazine, 10-(chloroacetyl)- (9CI) (CA INDEX NAME)



L4 ANSWER 75 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1963:448385 CAPLUS
DN 59:48385
OREF 59:8750a-h,8751a-f
TI The development of psychotropic agents. IV. Diphenylamine derivatives with
piperidyl-substituted side chains
AU Stach, K.; Thiel, M.; Bickelhaupt, F.
CS Firma C. F. Boehringer Soehne G.m.b.H., Mannheim-Waldhof, Germany
SO Monatshefte fuer Chemie (1962), 93(5), 1090-1106
CODEN: MOCMB7; ISSN: 0026-9247
DT Journal
LA German
GI For diagram(s), see printed CA Issue.
AB cf. CA 59, 6389e. A 4-piperidone HCl (1 mole) in 2 l. C6H6, 2 moles secondary alc., and 2 g. p-Me-C6H4SO3H was refluxed until no more H2O distd., the C6H6 soln. decanted, the residue treated with 1 l. CHCl3 and then with 120 g. K2CO3 and 120 ml. H2O with stirring, the CHCl3 layer sepd., the aq. soln. extd. several times with CHCl3, and the combined CHCl8 exts. evapd. to give I (R, R1, X, % yield, and b.p. given); H, H, CH2CH2, 80, b26 108-10.degree.; H, H, (CH2)3, 72, b20 118-20.degree.; H, H, CH2CHCH2OH, 58, b13 175-7.degree.; Me, H, CH2CH2, 28, b0.2 60-2.degree.; Me, Me, CH2CH2, 67, b0.2 50-2.degree.. A soln. of 0.1 mole substituted alkyl chloride and 0.12 mole I in 200 ml. butanone or Et2CO was treated with 0.15 mole alkali carbonate and 0.5 g. NaI, the mixt. refluxed 8-10 hrs., filtered, the filtrate evapd. to dryness, the residue dissolved in Et2O, extd. at 0-10.degree. with 5-10% AcOH, the acid ext. alkalized, and extd. with Et2O to give II (R, X, Y, % yield, m.p. or b.p., and m.p. HCl salt given): H, (CH2)2, -, 67, 100-1.degree., 229-31.degree.; H, (CH2)3, -, 65, 82-4.degree., 154-5.degree.; H, (CH2)2, S, 81, 116-18.degree., 195.degree.; H, (CH2)2, S, 74, 132-3.degree., 193-4.degree.; H, (CH2)2, CH2OH, S, 37, 117-18.degree., -; H, (CH2)2, S (the piperidine ring is 2,6-Me2 disubstituted), 27, b0.2 278-82.degree., 140-1.degree.; Cl, (CH2)2, S, 83, b0.2 280-90.degree., 151-2.degree.; OMe, (CH2)2, S, 73, 80-2.degree., -; H, (CH2)2, O, 81, 103-5.degree., 212-13.degree.; H, (CH2)2, CH2CH2, 70, -, 205-6.degree.; H, (CH2)2, CH:CH, 69, 102-3.degree., 206-8.degree.. III (R and Y as for II) (0.1 mole) and 0.1 mole NaNH2 or NaH in 200 ml. abs. PhMe refluxed 4 hrs., treated with 0.1 mole 1-(3-chloropropyl)-4-piperidone ethylene ketal, refluxed 6-8 hrs., decompd. with H2O, extd. with dil. AcOH, and worked up as usual also gave II. 1-(2-Ethoxycarbonylethyl)-4-piperidone-HCl (26 g.), 9 g. glycol, 300 ml. abs. C6H6, and 0.5 ml. concd. H2SO4 refluxed until no more H2O was collected, the mixt. cooled to 0.degree., poured into concd. Na2CO8 soln., the C6H6 sepd., washed with H2O, dried, and distd. gave 82% the ethylene ketal (IV), b0.2 113-16.degree.; HCl salt m. 159-60.degree.. IV in Et2O reduced with LiAlH4 gave 85% 1-(3-hydroxypropyl)-4-piperidone ethylene

ketal (V), m. 86-7.degree., also prepd. in 72% yield by refluxing 42.5 g. 4-piperidone ethylene ketal, 26.3 g. trimethylene chlorohydrin, 50 g. K2CO3, 1 g. NaI, and 250 cc. Et2CO 10 hrs. V with SOCl2 in refluxing C6H6 gave 97% 1-(3-chloropropyl)-4-piperidone ethylene ketal, b0.6 121-5.degree.; HCl salt m. 191-2.degree.. II.HCl dissolved in 10-15 parts H2O, treated with 2N HCl to Congo red, refluxed 8-12 hrs., alkalized, and extd. with Et2O or CH2Cl2 gave the free ketone (R, Y, % yield, m.p. or b.p., and m.p. HCl salt given): H, -, 78, -, 169-70.degree. (monohydrate); H, S (Va), 81, 78-80.degree., 88-90.degree. (monohydrate); H, S (the piperidine ring is 2,6-Me2 disubstituted), 92, -, 152-3.degree., Cl, S, 85, -, 102-4.degree. (monohydrate); OMe, S, 67, 93-5.degree., 80-90.degree. (monohydrate); H, O, 58, 86.degree., 190-2.degree.; H, CH2CH2, 75, b0.4 243-8.degree., 91-199.degree. (sic) (monohydrate); H, CH:CH, 60, 87-8.degree., 94-6.degree. (monohydrate). The free ketone was reduced with Raney Ni in MeOH, with LiAlH4 in Et2O, or with NaBH4 in MeOH to the 4-piperidinol analog (R, Y, % yield, m.p., and m.p. HCl salt given): H, -, 70, 92-3.degree., 233-4.degree.; Ac, -, 55, -, 192-3.degree. H, S, 82, -, 191-2.degree.; Cl, S, 70, 92-3.degree., -; OMe, S, 66, 93-4.degree., -; Ac, S, 82, -, 167-8.degree.; MeCHOH, S, 72, 155-6.degree., -; H, O, 79, -, 256-8.degree.; acetyl ethylene ketal, O, 65, 107-8.degree. -; Ac, O, 75, -, 240-2.degree.; H, CH2CH2, 73, -, 197-8.degree.; H, CH:CH, 60, -, 208-10.degree.. To a soln. of 3.5 g. Na in 350 cc. liquid NH8 in the presence of 0.5 g. FeCl3.6H2O was added 28.5 g. 2-acetylphenothiazine ethylene ketal, the mixt. stirred 1 hr., treated with 1-chloro-3-bromopropane, stirred 5 hrs., treated with 300 cc. Et2O, and allowed to evap. overnight gave 44-50% 2-acetyl-10-(3-chloropropyl)phenothiazine ethylene ketal (VI), m. 87-9.degree.. VI (22 g.), 7.3 g. 4-piperidinol, 17 g. K2CO3, 1.1 g. 82% NaI, and 280 cc. Et2CO refluxed 8 hrs. under N gave 82% 2-acetyl-10-[3-(4-hydroxypiperidino)propyl]phenothiazine (VII) as HCl salt, m. 159-60.degree.. reduced with NaBH4 in alk. MeOH to the 2-(1-hydroxyethyl) analog of VII. m. 155-6.degree., in 72% yield. Treating 2-acetylphenoxazine ethylene ketal with NaNH2 in liquid NH3 and then with 1-chloro-3-bromopropane as above gave 54% 2-acetyl-10-(3-chloropropyl)phenoxazine (VIII) ethylene ketal, m. 82-4.degree. (Et2O-ligroine), hydrolyzed with alc. aq. HCl to 13-20% VIII, m. 90-3.degree.. VIII ethylene ketal, 4-piperidinol, K2CO8, and NaI in butanone as above gave 65% 3-(4-hydroxypiperidyl)propyl analog, m. 107-8.degree., hydrolyzed with 2N HCl to 75% 2-acetyl-10[3-(4-hydroxypiperidyl)propyl]phenoxazine, m. 164-5.degree.; HCl salt m. 239-41.degree. (alc.). 4-Methoxypyridine (140 g.), 10 cc. MeOH, and 10 cc. H2O with 0.5 g. Ru2O4 under an initial pressure of 150 atm. H was slowly heated to 140.degree., at which temp. redn. began. The temp. was kept below 150.degree. by cooling, redn. continued for 4 hrs., and the

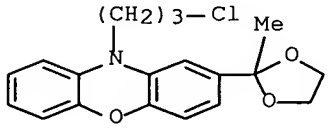
mixt. worked up to give 70-75% 4-methoxypiperidine, b. 163-6.degree.. Similarly were prepd. 4-ethoxy-(b. 174-6.degree.), 4-propoxy-(b. 196-8.degree.), and 4-isopropoxypiperidine, b. 184-6.degree.. By methods used for the prepn. of II were prepd. the following IX (R, R1, Y, % yield, m.p. or b.p., and m.p. HCl salt given): H, OMe, -, 70, 94-6.degree., -; H, OEt, -, 62, 66-7.degree., 180-1.degree.; Ac, OMe, 75, -, 100-5.degree. Ac, OEt, -, 72, -, 195-6.degree.; H, OMe, S (X), 75, -, 156-8.degree. H, OEt, S, 68,-, 156 7.degree.;-H, iso-PrO, S, 74, 155-7.degree.; H, PrO, S, 50, -, 156-8.degree.; Cl, OMe, S, b0.05 230-5.degree., -; OMe, OMe, S, 64, b0.1 235-40.degree., -; Ac, OMe, S, 83, -, 130-1.degree.; MeCHOH, OMe, S, 89, -; 124-6.degree.; Ac, OEt, S, 54, 233-40.degree./10-3 mm., -; H, OMe, O, 61, 45-7.degree., 192-3.degree.; H, OEt, O, 55, 58-60.degree., 198-200.degree.; Ac, OMe, O; 70, -, 177-9.degree.; Ac, OEt, O, 70, -, 198 200.degree.; H, OMe, CH2CH2, 60, -, 172-4.degree.; H, OMe, CH:CH, 63, -, 181-2.degree.. To a soln. of 13 g. IX (R = H, R1 = OH, Y = S) and 10 g. (iso-PrO)3Al in 100 cc. abs. dioxane was added over 8 hrs. CH2N2-Et2O (from 36 g. nitrosomethylurea). After several hrs. stirring, the soln. was poured into 2N HCl, the aq. layer alkalized, extd. with Et2O, Et2O distd., the residue dissolved in alc., and treated with (CO2H)2 to give 70% X oxalate, m. 185-6.degree.. To 200 cc. liquid NH3, 5.8 g. NaNH2, and 20 g. 2-acetylcarbazole in 100 cc. tetrahydrofuran (THF) stirred 1 hr. was added 22 g. 1-chloro-3-bromopropane and the mixt. stirred 6 hrs. with dry ice-cooling to give 57% 2-acetyl-9-(3-chloropropyl)carbazole, m. 99-101.degree.. To a hot soln. of 2.6 g. NH2OH.HCl in 50 cc. EtOH was added 10 g. Va to give 96% the oxime-HCl, m. 228-30.degree.; free base m. 112-14.degree.. Redn. of the oxime in THF with LiAlH4 gave 70% 1-[3-(10-phenothiazinyl) propyl]-4-aminopiperidine-2HCl (XI), m. 266-8.degree.. Va (10 g.) in 100 cc. MeOH was satd. with MeNH2 and then reduced with Raney Ni to give 76% the 4-methylamino analog of XI, m. 263-4.degree.. Similarly, with NH3, was prepd. XI. Redn. of 9.7 g. 1-[3(10-phenothiazinyl)propyl]-4-dimethylaminopyridinium chloride and 1 g. NaOH in 10 cc. MeOH with 8 g. NaBH4 in MeOH gave 82% 4-dimethylamino analog of XI, m. 284-6.degree.. 4-(2-Hydroxyethyl)piperidine (150 g.) and 500 cc. EtOH in the presence of 3 g. RuO2 was reduced in an autoclave at 90.degree. and 160-90 atm. H for 80 hrs. to give 94% crude 4-(2-hydroxyethyl)piperidine (XII), b0.2 101-11.degree.. By methods used for the prepn. of II, an alkyl chloride and XII gave the following IX (R1 = CH2CH2OH) (Y, R, % yield, m.p., and m.p. HCl salt given): -, H, 50, -, 188-9.degree.; -, Ac, 63, -, 100-3.degree.; S, H, 68, -, 182-3.degree.; S, Ac, 80, 98-100.degree., 100-10.degree.; O, H, 54, 109-10.degree.,

150-2.degree.; O, Ac, 90, 114-15.degree., 215.degree.; O, acetyl ethylene
ketal, 77, 106-7.degree. -. Similarly were prepd. the following IX (R1 =
H) (Y, R, m.p. HCl salt, and % yield given): -, H, 221-3.degree., 74; -, Ac, 188-9.degree., 78; S, H, 176-7.degree., 40; S, Ac, 175-6.degree., 60;
O, H, 199-200,% 70; O, Ac, 230-2.degree., 85 (prepd. via the ethylene ketal, m. 80-1.degree.).

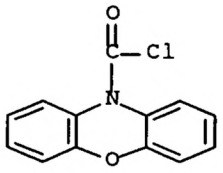
IT **99673-60-6**, Phenoxazine, 10-(3-chloropropyl)-2-(2-methyl-1,3-dioxolan-2-yl)-
(prepn. of)

RN 99673-60-6 CAPLUS

CN Phenoxazine, 10-(3-chloropropyl)-2-(2-methyl-1,3-dioxolan-2-yl)- (7CI) (CA INDEX NAME)



L4 ANSWER 76 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1963:14881 CAPLUS
DN 58:14881
OREF 58:2449g-h,2450a-b
TI Phenoxazine series. VI. Synthesis of some 10-substituted phenoxazines
AU Samolovova, V. G.; Gortinskaya, T. V.; Shchukina, M. N.
CS S. Ordzhonikidze All-Union Chem.-Pharm. Res. Inst., Moscow
SO Zhurnal Obshchei Khimii (1962), 32, 1085-8
CODEN: ZOKHA4; ISSN: 0044-460X
DT Journal
LA Unavailable
AB cf. CA 55, 1623b; 57, 12477h; Belg. 569,697, CA 54, 586d. Heating phenoxazine with COCl2 in MePh in an ampul 10-12 hrs. at 110-15.degree. gave 90.6% 10-phenoxazinecarbonyl chloride, m. 142-4.degree., which with hot aq. NaOH gave phenoxazine. The chloride and N-methyl-N'-(.beta.-hydroxyethyl)piperazine refluxed 16 min. in xylene gave 91% .beta.-(N-methyl-N'-piperazinyl)ethyl-10-phenoxazinecarboxylate (Ia), m. 236-8.degree.. Similarly was prepd. 90.4% .gamma.-dimethylaminopropyl ester (I), m. 214-16.degree.; 94% .beta.-chloroethyl ester, m. 119-20.degree.; and 95.5% .beta.-piperidinoethyl ester, m. 173-5.degree. (also prepd. from I and dimethylaminopropanol at reflux). Phenoxazine in MeOH treated with MeO2CCl at reflux 10 min. gave 86.5% Me 10-phenoxazinecarboxylate, m. 119-20.degree., also formed from the acyl chloride (II) in refluxing MeOH. II and piperidine in refluxing xylene 15 min. gave 90.8% piperidide, m. 113-14.degree.. Similarly was prepd. 4-methylpiperazide, isolated as HCl salt, m. 239-40.degree.. Phenoxazine mixed with powd. NaOH and treated with N-.beta.-chloroethylpiperidine 4.5 hrs. on a steam bath gave after treatment with HCl in EtOH 10-(.beta.-piperidinoethyl)phenoxazine-HCl, m. 243-4.degree.; similarly was prepd. the morpholino analog-HCl, m. 222-4.degree.. Phenoxazine and ethylene oxide in MePh in the presence of NaNH2 3 hrs. at 100.degree. in an ampul gave after acidification and extn. with C6H6 10-(.beta.-hydroxyethyl)phenoxazine, m. 109-10.degree. (after sublimation in vacuo).
Ia heated to 190.degree. in vacuo gave CO2 and after treatment with alc. HCl gave 10[.beta.-(N-methyl-N'-piperazinyl)ethyl]phenoxazine, m. 255-6.degree., a very hygroscopic solid. Similar decarboxylation of I gave phenoxazine if the reaction was run in vacuo at 200-12.degree., while at atm. pressure, along with phenoxazine, some unsatd. amine was also detected.
IT **38955-66-7**, Phenoxazine-10-carbonyl chloride
(prepn. of)
RN 38955-66-7 CAPLUS
CN 10H-Phenoxazine-10-carbonyl chloride (9CI) (CA INDEX NAME)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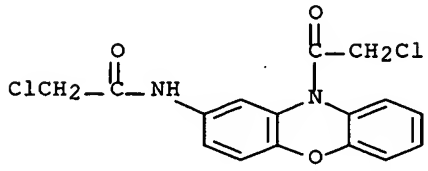
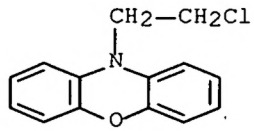
L4 ANSWER 77 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1962:462748 CAPLUS
DN 57:62748
OREF 57:12477h-i,12478a-b
TI Phenoxazine series. V. 2-Aminophenoxazine and other 2-substituted phenoxazines
AU Predvoditeleva, G. S.; Shchukina, M. N.
CS S. Ordzhonikidze All-Union Chem. Pharm. Res. Inst., Moscow
SO Zhurnal Obshchei Khimii (1962), 32, 113-17
CODEN: ZOKHA4; ISSN: 0044-460X
DT Journal
LA Unavailable
AB cf. CA 55, 23541a; Belg. 575,133, CA 54, 5708f. 2,-Acetylphenoxazine in concd. H2SO4-CHCl3 was treated with NaN3 at 5.degree. followed by 1 hr. at 60.degree. and 12 hrs. at room temp.; after quenching in ice this gave 67% 2-acetamidophenoxazine (I), m. 183-5.degree., which heated with Ac2O 3 hrs. gave 2-acetamido-10-acetylphenoxazine, m. 208-9.degree.. I heated 2 hrs. with 2N HCl gave pink 2-aminophenoxazine-HCl (II), did not m. 300.degree.. This and ClCH2COCl in the presence of NaOAc in 2 hrs. gave 2-chloro-acetamido-10-chloroacetylphenoxazine, m. 151-3.degree. (EtOH). II and p-ethoxyphenyl isothiocyanate in abs. EtOH-pyridine gave after brief refluxing N-(p-ethoxyphenyl)-N'(2-phenoxazinyl)thiourea, decompd. at 200-2.degree.. Refluxing 2-chloroacetylphenoxazine with SC(NH2)2 in EtOH 2 hrs. gave after quenching in H2O and heating the product with Ac2O 0.5 hr. pinkish 2-acetamido-4-(10-acetyl-2phenoxazinyl)thiazole, decompd. at 210-12.degree.. Similar reaction of 2-chloroacetyl-10-acetylphenoxazine gave 2amino-4-(10-acetyl-2-phenoxazinyl)thiazole, decompd. at 143-5.degree.. 2-Amino-4-(2-phenoxazinyl)thiazole refluxed with Ac2O in C6H6 20 min. gave 2-acetamido-4-(2-phenoxazinyl)thiazole, deeompd. at 265.degree..
IT **92854-25-6**, Phenoxazine, 2-(2-chloroacetamido)-10-(chloroacetyl)- (prepn. of)
RN 92854-25-6 CAPLUS
CN Phenoxazine, 2-(2-chloroacetamido)-10-(chloroacetyl)- (7CI) (CA INDEX NAME)



L4 ANSWER 78 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1962:442841 CAPLUS
DN 57:42841
OREF 57:8567b-f
TI Nitrogen mustard derivatives of phenothiazine and phenoxazine
AU Shirley, David A.; Sen, Kalyanmay; Gilmer, John C.
CS Univ. of Tennessee, Knoxville
SO Journal of Organic Chemistry (1961), 26, 3587-8
CODEN: JOCEAH; ISSN: 0022-3263
DT Journal
LA Unavailable
AB The title compds. were prepd. for evaluation as anticancer agents. To 11.5 g. phenoxazine in 75 ml. dry C6H6 was added gradually 45 ml. soln. of 0.063 mole BuLi in pentane-heptane mixt. in a N atm., the mixt. stirred 30 min., added to 15 g. 4-MeC6H4SO3CH2CH2Cl in 90 ml. C6H6, refluxed and stirred 16 hrs., treated with excess H2O, washed several times with H2O, the C6H6 soln. evapd., the oily residue chromatographed on Al2O3 in ligroine, and the column eluted with 1:1 C6H6-ligroine to give (in the 1st fraction) 9.3 g. 10-(2-chloroethyl)phenoxazine (I), m. 62.degree. (MeOH).
I (9.8 g.) in 170 ml. (HOCH2CH2)2NH (II) heated 18 hrs. at 130-40.degree., cooled, dild. with 200 ml. H2O, extd. twice with C6H6 and 3 times with CHCl3, the combined exts. evapd., and the residual oil triturated with petr. ether gave 12 g. 10-[2-[bis(2-hydroxyethyl)amino]ethyl]phenoxazine (III), m. 84.degree. (C6H6-petr. ether). III (5.0 g.) in 15 ml. POCl3 heated 1 hr. on a steam bath, concd. in vacuo, the residual solid dissolved in CHCl3, the soln. washed with cold H2O, evapd., the residue suspended in C6H6, the mixt. stirred with aq. Na2CO3, the C6H6 soln. sepd., the aq. layer extd. twice with C6H6, the combined C6H6 solns. evapd., the residual oil chromatographed on Florisil, the column eluted with C6H6, and the oily product (obtained in the 1st fraction) converted to the HCl salt gave 52% (overall) 10-[2-[bis(2-chloroethyl)amino]ethyl]phenoxazine-HCl, m 148.degree. (EtOH).
10-(2-Chloroethyl)phenothiazine (IV) (6.0 g.) treated with II as above, the oily product chromatographed on Florisil, and the column eluted with C6H6 (IV removed) and then with 19:1 C6H6-Me2CO gave 5.95 g. 10-[2-[bis(2-hydroxyethyl)amino]ethyl]phenothiazine (V), oil; HCl salt m. 143-4.degree.. V treated with POCl3 as above gave 55% 10-[2-[bis(2-chloroethyl)amino]ethyl]phenothiazine, m. 54.5-5.5.degree. (petr. ether); HCl salt m. 126-31.degree. (deompn.) (at atm. pressure) and 132-3.degree. (evacuated capillary tube).
IT **92290-66-9**, Phenoxazine, 10-(2-chloroethyl)-
(prepn. of)
RN 92290-66-9 CAPLUS
CN Phenoxazine, 10-(2-chloroethyl)- (7CI) (CA INDEX NAME)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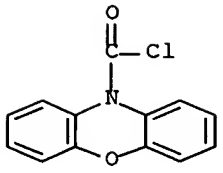
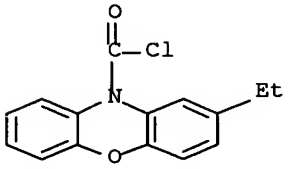
L4 ANSWER 79 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1962:53396 CAPLUS
DN 56:53396
OREF 56:10138g-i,10139a-b
TI Phenoxazines. III. Dialkylaminoalkylphenoxazine-10-carboxylates
AU Claesen, M.; Vanderhaeghe, H.
CS Univ. Louvain, Belg.
SO Journal of Organic Chemistry (1961), 26, 4130-1
CODEN: JOCEAH; ISSN: 0022-3263
DT Journal
LA Unavailable
AB Various dialkylaminoalkyl esters of phenoxazine-10-carboxylic acid (I) were prepd. by the reaction of the appropriate amino alc. with phenoxazine-10-carbonyl chloride (II). I were decarboxylated by heating and the corresponding dialkylaminoalkylphenoxazines were obtained. COCl2 (40 g.) in PhMe added to 11 g. phenoxazine in 25 ml. PhMe 3 hrs. at 115.degree. in an autoclave, evapd., and the product crystd. gave 13.9 g. II, m. 139-41.degree. (EtOAc). II (7.5 g.) and 3.15 g. 3-dimethylaminopropanol in 30 ml. C6H6 heated 17 hrs. on the steam bath, cooled, the ppt. dried, and recrystd. gave 6.3 g. 3-dimethylaminopropyl ester of I.HCl, m. 215-16.degree.(decompn.) (alc.). The following I were similarly obtained [ester group, and m.p. of the HCl salt (decompn.) given]: CH2CH2NMe2, 196-7.degree.; CH2CH2NEt2, 132-4.degree.; CH2CH2N(C5H)5, 170-2.degree.; CH2CH2CH2NEt2, 184-6.degree.. 2-Ethylphenoxazine-10-carbonyl chloride (III) was prepd. from 6.76 g. 2-ethylphenoxazine in 10 ml. PhMe 3.5 hrs. at 75.degree.. The yield of III was 34%. III (8.75 g.) and 9.1 g. 2-pyrrolidinopropanol in 30 ml. C6H6 heated 5.5 hrs., dild. with Et2O, extd. with 5% HCl, separated, made alkaline, again extd. with Et2O, and the residue decarboxylated by heating at 220-30.degree./20-40 mm., and the product distd. at 215.degree./0.8 mm. gave 7.3 g. base. The base treated with HCl gave 6.45 g. 2-ethyl-10-(3-pyrrolidinopropyl)phenoxazine-HCl (IV), m. 174-5.degree.. I CH2CH2CH2NMe2 ester (6.25 g.) in H2O made alk., extd. with Et2O, the residue decarboxylated at 215.degree./35-45 mm., and the residual oil distd. at 173.degree./0.3 mm., and transformed with HCl gave 2.73 g. 10-(3-dimethylaminopropyl)phenoxazine-HCl, m. 132-4.degree..
IT **38955-66-7**, Phenoxazine-10-carbonyl chloride **92433-62-0**, Phenoxazine-10-carbonyl chloride, 2-ethyl-
(prepn. of)
RN 38955-66-7 CAPLUS
CN 10H-Phenoxazine-10-carbonyl chloride (9CI) (CA INDEX NAME)



RN 92433-62-0 CAPLUS
CN Phenoxazine-10-carbonyl chloride, 2-ethyl- (7CI) (CA INDEX NAME)



L4 ANSWER 80 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1962:53395 CAPLUS
DN 56:53395
OREF 56:10137d-i,10138a-g
TI Phenoxazines. II. 10-Dialkylaminoalkylphenoxazines
AU Vanderhaeghe, Hubert; Verlooy, Lucien
CS Univ. Louvain, Belg.
SO Journal of Organic Chemistry (1961), 26, 3827-31
CODEN: JOCEAH; ISSN: 0022-3263
DT Journal
LA Unavailable
AB cf. CA 55, 1621e. The prepn. of a no. of 10-dialkylaminoalkyl derivs. of phenoxazine (I) and of 2-ethylphenoxazine (H) was described. Various methods of synthesis were examd. Method A. I (51.6 g.), 12.4 g. NaNH2, and 150 ml. PhMe refluxed 1 hr., 42.1 g. 3-pyrrolidinopropyl chloride in 50 ml. PhMe added dropwise, the mixt. refluxed 2 hrs., treated with H2O, extd. with dil. HCl, the acid exts. made alk., extd. with C6H6, and evapd. gave 3 g. unchanged I. The C6H6 ext. afforded 62 g. 10-(3-pyrrolidinopropyl)phenoxazine (III), b3 220-2.degree.; HCl salt m. 162-3.degree.. Method B. I (7.32 g.) added to NaNH2 (prepd. by dissolving 1.01 g. Na in 40 ml. NH3 contg. a crystal of Fe(NO3)3), stirred 0.25 hr., 6.3 g. 1-chloro-3-bromopropane added, after 0.5 hr. the NH3 evapd., H2O added, extd. with Et2O, dried, and evapd. gave a residue. The residue in 25 ml. PhMe, 5.68 g. pyrrolidine, and a small amt. of Cu powder heated 48 hrs. at 100-10.degree. gave 7.61 g. III. The residue after evapn. of the Et2O upon distn. gave 77% 10-(3-chloropropyl)phenoxazine, m. 54-5.degree. (alc.). I (29.2 g.) and 6.4 g. NaNH2 in 80 ml. PhMe refluxed 1 hr., stirred 3 hrs. with 10 g. propylene oxide, left overnight, filtered, the soln. treated with H2O, evapd., extd. with C6H6, dried, and evapd. gave 30.4 g. 10-(2-hydroxypropyl)phenoxazine (IV), m. 95-8.degree.. When propylene chlorohydrin was used, the only product was unchanged I. (8.4 g.) with 3.5 g. propylene oxide gave 5.35 g. 2-ethyl-10-(2-hydroxypropyl)phenoxazine, m. 78-80.degree., b0.4 190.degree.. p-MeC6H4SO2Cl (25 g.) in 30 ml. C5H5N added to 29.5 g. IV in 40 ml. C5H5N, the mixt. stirred 2 hrs., left overnight, treated with ice H2O, the solid filtered off, and the product recrystd. gave 40 g. 10-[2-(p-tolylsulfonyloxy)propyl]phenoxazine (V), m. 136-8.degree. (alc.-Me2CO). 2- Ethyl-10-[2-(p-tolylsulfonyloxy)propyl] phenoxazine was similarly prepd., m. 85-6.degree. (alc.). Method C. V (3 g.) added to 3 g. NHEt2 in 30 ml. PrOH, the mixt. heated 48 hrs. at 120.degree. in a closed vessel, evapd., the residue dissolved in 10% NaOH, the org. base extd. with dil. HCl, made alk., extd. with Et2O, and evapd. gave 0.3 g. 10-(2-diethylaminopropyl)phenoxazine-HCl (VI), m. 208-10.degree. (alc.). I (7.32 g.) treated with 1-diethylamino-2-chloropropane in the presence of NaNH2 gave 7.1 g. base, distd. at 180.degree./1 mm. The base

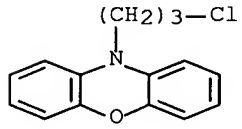
neutralized with HCl in alc. gave 5.43 g. HCl salt and 2.14 g. 2nd crop. The first product dissolved in H2O, extd. with Et2O after being made alk., and treated with picric acid gave 4.78 g. picrate, m. 152-3.degree. (decompn.). The picrate was turned into VI by extn. with Et2O, made basic, evapd., and neutralized with HCl. The 2nd product was purified through the picrate, m. 152-3.degree., to give the HCl salt of 10-(2-diethylaminoisopropyl)phenoxazine, m. 162-4.degree.. I (11 g.) and 2.8 g. NaNH2 in 30 ml. PhMe refluxed 1 hr., treated 4 hrs. at room temp. with 10.9 g. Et .beta.-bromopropionate, refluxed 0.5 hr., treated with H2O, extd. with C6H6, the ext., dried, and evapd. gave 7.3 g. Et .beta.-(10-phenoxazinyl)propionate (VII), b2 210.degree.. VII (7.3 g.) in 40 ml. Et2O added to 1.4 g. LiAlH4 in 60 ml. Et2O, the mixt. refluxed 2 hrs., cooled, decompd., made acidic, extd. with Et2O, and the residue distd. gave 4.54 g. 10-(3-hydroxypropyl)phenoxazine (VIII), m. 68.degree.. VIII treated with p-MeC6H4SO2Cl in C5H5N gave 10-[3-(p-tolylsulfonyloxy)propyl]phenoxazine, m. 52-4.degree., resolidified, and m. 158.degree.. II (12.6 g.) and 2.5 g. NaNH2 in 60 ml. xylene refluxed 1 hr., 10.8 g. 2-(3-chloropropoxy)tetrahydropyran in 20 ml. xylene added, the mixt. refluxed 48 hrs., cooled, treated with H2O, extd. with Et2O, and distd. At 160.degree. 2.5 g. unchanged II was recovered and at 230.degree. 12 g. tetrahydropyranyloxypropyl deriv. (IX). IX taken up in 80 ml. 75% alc. and 1.5 ml. concd. HCl, refluxed 1 hr., distd., the residue extd. with Et2O, and distd. gave 7.2 g. 2-ethyl-10-(3-hydroxypropyl)-phenoxazine (X), b0.5 230.degree.. PBr3 (20 g.) added to 12 g. X in 20 ml. CHCl3, the mixt. refluxed 1 hr. on the steam bath, washed, and the CHCl3 soln. evapd. gave 1.3 g. 2-ethyl-10(3-bromopropyl)phenoxazine. The following 10-dialkyl-aminoalkyl derivs. of I were thus obtained in addn. to the ones described above (10-side chain, method, b.p. of base/ mm., % yield, and m.p. of salt and salt given): CH2CH2, NMe2, A, 145-50.degree./1, 51, 237-8.degree., HCl; CH2CH2NEt2, A, 160-70.degree./1, 57, 167-9.degree., HCl; 2-piperidinoethyl, A, 170.degree./0.3, 44, 203-5.degree. HCl; 2-morpholinoethyl, A, 170.degree./1, 30, 226-7.degree., HCl; CH2CHMeNMe2, A, 160-70.degree./1, 70, 175-7.degree., HCl; 2-(4-methylpiperazino)-ethyl, A, 185.degree./1, 50, 258-60.degree., 2HCl; 2-piperidinopropyl, C, 200.degree./0.7, 24, 98-200.degree., HCl; CH2CH2CH2NMe2, A, 190.degree./0.5, 58, 132-4.degree., HCl; CH2CH2CH2NEt2, A, -, 70, 112-14.degree., succinate; CH2CH2NPr2, B, 210.degree./1, 64, 152-3.degree., HCl; 3-morpholinopropyl, B, 230.degree./1, 65, 195-6.degree., HCl; 3-piperidinopropyl, B, -, 76, 197-9.degree., HCl; 3-piperidinopropyl, C, -, 30, -; 3-(4-methylpiperazino)-propyl, A, 190.degree./1, 66, 245-6.degree., 2HCl; 3-[4-(2-hydroxyethyl)piperazino]propyl, B, 250.degree./1, 53,236-7.degree., 2HCl; CH2CHMeCH2NMe2, A, 170.degree./1, 64, 161-3.degree., HCl; CH2CHMeCH2NEt2, A, 190.degree./0.5, 60, 156-8.degree., HCl; 2-methyl-3-piperidinopropyl, A, 200.degree./0.8, 56, 170-1.degree., HCl. The following 10-dialkylaminoalkylderivs. of II were

similarly obtained (side chain, method, b.p./mm. of base, % yield, and m.p. of the salt, and salt given): CH2CH2NEt2, A, 210.degree./1, 69, 158-60.degree., HCl; 2-(4-methyl piperazino)ethyl, A, 210.degree./0.5, 65, 267-9.degree., 2HCl; CH2CHMeNEt2, C, 180.degree./0.3, 17, 178-80.degree., HCl; 2-piperidino- propyl, C, 200.degree./0.5, 20, 201-3.degree., HCl; CH2CH2CH2NMe2, A, 200.degree./1, 64, 208-9.degree., HCl; CH2CH2CH2NEt2, A, 210.degree./0.1, 50, 119-21.degree., succinate; CH2CH2NEt2, B, 200.degree./0.6, 33, -, -; 3-piperidinopropyl, A, 230.degree./1, 92, 174-5.degree., HCl; 3-piperidinopropyl, B, 210.degree./0.7, 40, -, -; 3-piperidinopropyl, D, -, 33, -,-; 3-(4-methylpiperazino)propyl, A, 230.degree./1, 68, 256-7.degree., 2HCl; 3-[4-(2-hydroxyethyl)piperazino]propyl, D, 250.degree./0.2, 26, 238-40.degree., 2HCl; CH2CHMeCH2NMe2, A, 185.degree./0.7, 68, 144-6.degree., fumarate; CH2CHMeCH2NEt2, A, 190.degree./0.3, 74, 126-9.degree., fumarate; 2-methyl-3-piperidinopropyl, A, 190.degree./0.3, 73,171-3.degree., HCl; 2-methyl-3-(4-methylpiperazino)propyl, A, 210.degree./0.3, 78, 215-17.degree., 2HCl.

IT **92425-82-6**, Phenoxazine, 10-(3-chloropropyl)- **93436-45-4**, Phenoxazine, 10-(3-bromopropyl)-2-ethyl- **95137-74-9**, Phenoxazine-10-ethanol, .alpha.-methyl-, p-toluenesulfonate **95137-75-0**, Phenoxazine-10-propanol, p-toluenesulfonate **95623-30-6**, Phenoxazine-10-ethanol, 2-ethyl-.alpha.-methyl-, p-toluenesulfonate
(prepn. of)

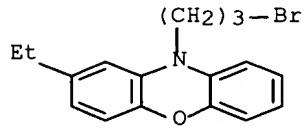
RN 92425-82-6 CAPLUS

CN 10H-Phenoxazine, 10-(3-chloropropyl)- (9CI) (CA INDEX NAME)



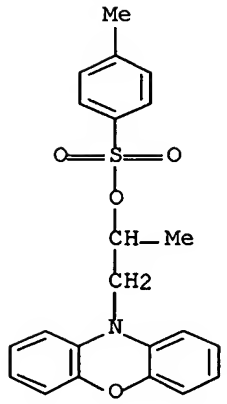
RN 93436-45-4 CAPLUS

CN Phenoxazine, 10-(3-bromopropyl)-2-ethyl- (6CI, 7CI) (CA INDEX NAME)

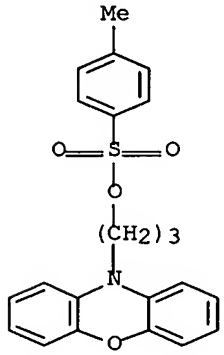


RN 95137-74-9 CAPLUS

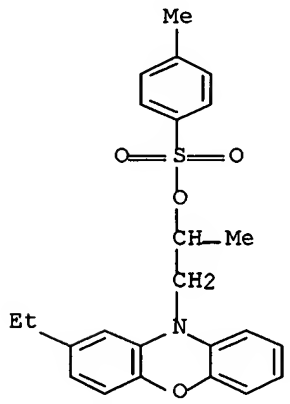
CN Phenoxazine-10-ethanol, .alpha.-methyl-, p-toluenesulfonate (6CI, 7CI) (CA INDEX NAME)



RN 95137-75-0 CAPLUS
CN Phenoxazine-10-propanol, p-toluenesulfonate (6CI, 7CI) (CA INDEX NAME)



RN 95623-30-6 CAPLUS
CN Phenoxazine-10-ethanol, 2-ethyl-.alpha.-methyl-, p-toluenesulfonate (6CI,
7CI) (CA INDEX NAME)



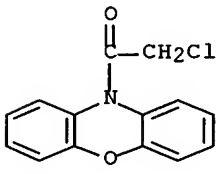
L4 ANSWER 81 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1962:46020 CAPLUS
DN 56:46020
OREF 56:8710h-i,8711a-f
TI Potential carcinostatic derivatives of benzo [a]- and benzo-[b]phenoxazine
AU Sen, Kalyanmay; Shirley, David A.
CS Univ. of Tennessee, Knoxville
SO Journal of Organic Chemistry (1961), 26, 3861-3
CODEN: JOCEAH; ISSN: 0022-3263
DT Journal
LA Unavailable
AB The syntheses of "nitrogen mustard" type derivs. and dialkylaminoalkyl derivs. of benzo[a]- (I) and benzo[b]-phenoxazine (II) were reported. 1-Amino-2-naphthol-HCl (10 g.) and 6 g. o-aminophenol (III) heated 3 hrs. at 185-90.degree., the product extd. with ligroine, the exts. chromatographed on Al2O3, and the product crystd. gave 3.5 g. I, m. 112.degree. (ligroine). I rapidly decompd. upon exposure to light and air. I acetylated at room temp. with excess Ac2O contg. anhyd. ZnCl2 gave 42% 12-acetylbenzo[a]phenoxazine, m. 126.degree. (MeOH). I (5.2 g.) in C6H6 added to 20 ml. BuLi in hexane contg. 0.02 mole BuLi, the mixt. refluxed 14 hrs. with 4.88 g. Me p-toluenesulfonate, treated with H2O, extd., and evapd, gave 67% 12-methylbenzo[a]phenoxazine, m. 107.degree. (95% alc.-H2O). 2,3-Dihydronaphthalene and III gave 55% II, m. 289.degree.; 12-acetyl deriv. m. 151.degree.. II was more stable than I to light and air. I (1 equiv.) and 1.3 equivs. ClCH2COCl refluxed 10-12 hrs. gave 70% 12-chloroacetylbenzo[a]phenoxazine, m. 184.degree.. 12-Chloro-acetylbenzo[b]phenoxazine, similarly prepd, in 60% yield, m. 131.degree.. The hitherto unreported 10-chloroacetylphenox-azine (IV), prepd. in 58% yield, m. 139-40.degree.. IV (1 g.) and 3 ml. NHEt2 in 20 ml. C6H6 refluxed 5 hrs., the filtrate extd. with 5% aq. HCl, the ext. neutralized, and the oil extd. with Et2O and chromatographed on Florisil gave 40% 10-diethylaminoacetylphenoxazine, m. 39-40.degree.; MeI deriv. m. 149.degree.. Attempts to convert IV to 10-[bis(2-hydroxyethyl)aminoacetyl]phenoxazine resulted in alcoholysis of the amide to the unstable 10-phenoxazinecarboxylic acid, since only phenoxazine could be isolated. Thus, NCOCH2N(CH2CH2Cl)2 could not be prepd. by this method. 10-(2-Chloroethyl)phenoxazine (3.7 g.) and 6.8 g. piperidine in 80 ml. xylene refluxed 144 hrs. gave when treated with 5% HCl 58% 10-(2-piperidinoethyl)phenoxazine, m. 242.degree.. 12-(2-Chloroethyl)benzo[a]phenoxazine (V), prepd. in 50% yield, m. 76.degree.; 12-(2-chloroethyl)benzo[b]phenoxazine (VI) (69% yield) m. 108.degree.. VI (2 g.) in 70 ml. diethanolamine heated 18 hrs. at 130-40.degree., dild. with H2O, extd. with C6H6CHCl3, and evapd. gave 2.2 g. 12-[2-[bis(2-hydroxyethyl)-amino]ethyl]benzo[b]phenoxazine (VII), m. 96.degree.; HCl salt m. 209.degree. (alc.-Et2O). VII (5 g.) in 15 ml. POCl3 heated 1 hr. and evapd., the residue extd. with hot CHCl3, washed, evapd., the residue suspended in C6H6, washed with dil. bicarbonate, the aq. portion extd. with C6H6, and the combined solns. chromatographed on Florisil gave 12-[2-[bis(2-chloroethyl)amino] ethyl] benzo[b] phenoxazine, green-yellow oil (HCl salt m. 160.degree.), in a 62% overall yield. V

was
similarly converted to 12-[2-[bis(2-chloroethyl)amino]ethyl]-benzo[a]phenoxazine, m. 68.degree., without the intermediate bis(hydroxyethyl) compd. being isolated (HCl salt m. 140.degree.), formed in 64% overall yield from V. The 12-dialkylamino-lkyl derivs. of I and II were prepd. by treating 1 equiv. of the benzophenoxazine in C6H6 with 1.1 equivs. BuLi in hexane was stirred 0.5 hr., 1 equiv. of the appropriate dialkylaminoalkyl chloride added, the mixt. refluxed 16 hrs., excess H2O added, the C6H6 layer extd. with 4% HCl, the combined acid exts. made basic, the pptd. base taken up in Et2O, evapd., and the residual oil distd. 12-Dimethyl-aminopropylbenzo[a]phenoxazine, thus obtained in 72% yield, b1 208.degree.; MeI deriv. m. 210.degree. (alc.-Et2O). Similarly, a 73% yield of 12-diethylaminoethylbenzo[b]phenoxazine, b1 250.degree., was obtained; picrate m. 190.degree. (dioxane-alc.), and a 72% yield of 12-dimethylaminopropylbenzo [b] phenoxazine was obtained; picrate m. 234.degree.; methiodide m. 242.degree..

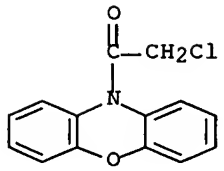
IT **43170-47-4**, Phenoxazine, 10-(chloroacetyl)-
(prepn. of)

RN 43170-47-4 CAPLUS

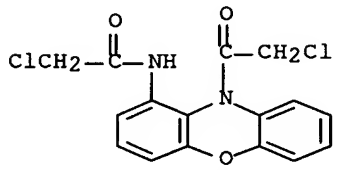
CN 10H-Phenoxazine, 10-(chloroacetyl)- (9CI) (CA INDEX NAME)



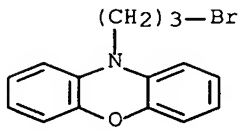
L4 ANSWER 82 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1961:124878 CAPLUS
DN 55:124878
OREF 55:23540f-i,23541a
TI Phenoxazine series. III. Glycidic derivatives of phenoxazine
AU Samolovova, V. G.; Gortinskaya, T. V.; Shchukina, M. N.
CS S. Ordzhonikidze All-Union Chem.-Pharm. Research Inst., Moscow
SO Zhurnal Obshchei Khimii (1961), 31, 1492-7
CODEN: ZOKHA4; ISSN: 0044-460X
DT Journal
LA Unavailable
AB cf. CA 55, 1623d, 7421f. Heating 109 g. o-H2NC8H4OH and 1 g. iodine 1.5-2
hrs. at 270.degree. and keeping there 4 hrs. with distn. of H2O gave 303%
phenoxazine, m. 153-5.degree., after extn. with hot C6H6, and passage over
Al2O3. Heated with ClCH2COCl in C6H6 1 hr. it gave 82.5%
10-chloroacetylphenoxazine, m. 145-6.5.degree., a strong skin irritant.
Redn. of 1-nitrophenoxazine with SnCl2 gave 80% 1-aminophenoxazine (I), m.
129-30.degree., which with HOCH2SO3Na and aq. NaHSO3 in EtOH gave after
0.5 hr. Na 1-phenoxazinylaminomethylsulfonate monohydrate. I and
Ac2O-AcONa heated with Zn dust 5 min. gave 1-acetamidophenoxazine, m.
213-15.degree.; in 1 hr. the reaction gave 1-acetamido-10-
acetylphenoxazine, m. 169-70.degree.. I and ClCH2COCl in MePh gave
1-chloroacetamidophenoxazine, m. 310-13.degree., after 10 min. at
3.degree.. A similar reaction in 2 hrs. in refluxing C6H6 gave 56.5%
1-chloroacetamido-10-chloroacetylphenoxazine, m. 179-81.degree.. I.HCl
and N-carbomethoxysulfanilyl chloride in aq. NaCl gave after 2 hrs. at
100.degree. 1-(N4-carbomethoxysulfanilamido)phenoxazine, m. 260-1.degree..
Heating the various chloroacetyl derivs. with appropriate amines 5 min. in
MeCOEt gave the following phenoxazines (substituent shown):
1-diethylaminoacetamido (HCl salt-H2O), a solid decompg. on being heated;
1-piperidinoacetamido (isolated as the HCl salt); 1-diethylaminoacetamido-
10-diethylaminoacetyl HCl salt, m. 235-6.degree.; 1-piperidinoacetamido-10-
piperidinoacetyl di-HCl salt hydrate, m. 238-41.degree.;
1-morpholinoacetamido-10-morpholinoacetyl di-HCl salt monohydrate, m.
236.5-7.degree.; 10-diethylaminoacetyl HCl salt; 10-morpholinoacetyl, m.
90-1.degree.; 10-(1-piperazinylacetyl), m. 154-5.degree.;
10-piperidinoacetyl, m. 110-12.degree.; 10-(4-methyl-1-piperazinylacetyl),
m. 115-16.degree.. 1,4-Bis[(2-oxo-2-(10-phenoxazinyl)ethyl)]piperazine m.
230-1.degree.. The latter group of derivs. was active against pathogenic
fungi and tuberculosis bacteria.
IT **43170-47-4**, Phenoxazine, 10-chloroacetyl- **101423-54-5**,
Phenoxazine, 1-(2-chloroacetamido)-10-chloroacetyl-
(prepn. of)
RN 43170-47-4 CAPLUS
CN 10H-Phenoxazine, 10-(chloroacetyl)- (9CI) (CA INDEX NAME)



RN 101423-54-5 CAPLUS
CN Phenoxazine, 1-(2-chloroacetamido)-10-chloroacetyl- (6CI) (CA INDEX NAME)



L4 ANSWER 83 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1960:110565 CAPLUS
DN 54:110565
OREF 54:21103a-d
TI The synthesis of 10-substituted phenoxazines
AU Frangatos, Gerassimas; Kohan, Geza; Chubb, Francis L.
CS Frank W. Horner, Ltd., Montreal
SO Canadian Journal of Chemistry (1960), 38, 1021-5
CODEN: CJCHAG; ISSN: 0008-4042
DT Journal
LA Unavailable
AB Alkylation of phenoxazine (I) with dialkylaminoalkyl chlorides in refluxing xylene in the presence of sodamide yielded the following 10-substituted phenoxazines: 2-dimethylaminoethyl, b2.5 168.degree.; 2-diethylaminoethyl, HCl salt m. 241-2.degree.; 3-dimethylaminopropyl, b2 178.degree.; 2-di-methylaminopropyl, b2.5 168.degree.. Yields were 60, 55, 80, and 56%, resp. I with acrylonitrile or Et acrylate in the presence of benzyltrimethylammonium hydroxide yielded 3-(10-phenoxazinyl)propionitrile (II), m. 121-2.degree., and Et 3-(10-phenoxazinyl)propionate (III), b1 187.degree., in yields of 73 and 67%, resp. Refluxing II or III with alc. NaOH or KOH, resp., yielded 3-(10-phenoxazinyl)propionic acid (IV), m. 138.degree.. 10-(3-Hydroxypropyl)phenoxazine (V), m. 68.degree., was prepd. by redn. of III or IV with LiAlH4. Dehydration of IV with P2O5 in refluxing benzene yielded 2,3-dihydro-1H-pyrido[3,2,1-k]phenoxazin-3-one, m. 104.degree.; semicarbazone m. 232.degree.. V with SOCl2 or PCl5 yielded tars but with PBr3 yielded 48% 10-(3-bromopropyl)phenoxazine (VI), m. 55-6.degree.. Heating VI at 100.degree. with 1-methylpiperazine yielded 10-[3-(4-methyl-1-piperazinyl)propyl]phenoxazine, m. 89-91.degree., in 74% yield.
IT **101102-61-8**, Phenoxazine, 10-(3-bromopropyl)-
(prepn. of)
RN 101102-61-8 CAPLUS
CN Phenoxazine, 10-(3-bromopropyl)- (6CI) (CA INDEX NAME)



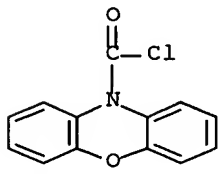
L4 ANSWER 84 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1960:44762 CAPLUS
DN 54:44762
OREF 54:8864b-d
TI Phenoxazine derivatives
PA Recherche et industrie therapeutiques (R.I.T.) S. A.
SO Addn. to Belg. 569,697 (C.A. 54, 586d)
DT Patent
LA Unavailable
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI BE 577565		19591010	BE	

AB The phenoxazine-10-carboxylic acid .gamma.-dimethylaminopropyl ester hydrochloride (I), m. 216.degree. (decompn.), is prepd. in 1.85-g. yield by refluxing 17 hrs. 2.5 g. phenoxazine-10-carboxylic acid chloride (Ia), 1.05 g. .gamma.-dimethylaminopropanol, and 10 cc. anhyd. C6H6, the product crystd. from abs. EtOH, and dried at 80.degree. under reduced pressure in the presence of P2O5. The Ia, m. 139-41.degree. (EtOAc), is prepd. in 13.9-g. yield by heating 3.5 hrs. at 115.degree. in a sealed tube 11 g. phenoxazine and 40 g. 30% COCl2 anhyd. toluene. The corresponding .beta.-diethylaminoethyl ester hydrochloride, m. 132-4.degree., .gamma.-diethylaminopropyl ester hydrochloride, m. 184-6.degree., and the .beta.-pyrrolidinoethyl ester hydrochloride, m. 170-2.degree. (softening 165.degree.), are similarly prepd. 10-(.gamma.-Dimethylaminopropyl)phenoxazine hydrochloride, m. 134.degree., is prepd. by treating 6.2 g. I in 150 cc. H2O with 30 cc. 10% NaOH, extg. the ester with Et2O, and decarboxylating at 215.degree./16 mm. The product, b0.3 175.degree., is dissolved in Et2O and treated by an ethanolic HCl soln. The 10-(.beta.-diethylaminoethyl)phenoxazine hydrochloride, m. 167-9.degree., the 10-(.beta.-pyrrolidinoethyl)phenoxazine hydrochloride, m. 203-5.degree., and the 10-(.gamma.-diethylaminopropyl)phenoxazine acid succinate (m. 112-15.degree.) or picrate (m. 138-42.degree.) are similarly prepd.

IT **38955-66-7**, Phenoxazine-10-carbonyl chloride
(prepn. of)

RN 38955-66-7 CAPLUS
CN 10H-Phenoxazine-10-carbonyl chloride (9CI) (CA INDEX NAME)



L4 ANSWER 85 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1960:28856 CAPLUS
DN 54:28856
OREF 54:5708f-i,5709a-i,5710a-d
TI Phenoxazine derivatives
PA Recherche et industrie therapeutiques (R.I.T.) S.A.
DT Patent
LA Unavailable
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	BE 575133		19590727	BE	

AB 3-Acetylphenoxazine (I) is prepd. as follows. 10-Acetylphenoxazine (22.5 g.) in 400 cc. CS2 is slowly added with stirring to 40 g. anhyd. AlCl2, the mixt. refluxed hr., 11.7 g. AcCl added maintaining ebullition, the mixt. refluxed 2 hrs., then cooled, decanted, ice and 10 cc. HCl added, the ppt. washed with H2O, refluxed with 200 cc. AcOH and 50 cc. HCl 10 min., after cooling the ppt. washed with H2O and dried, extd. with C6H6, and crystd. to afford 20.2 g. yellowish green product, m. 211-13.degree..
3-Propionylphenoxazine, m. 216-18.degree., 3-butyrylphenoxazine, m. 107-8.degree., and 3-chloroacetylphenoxazine, m. 218-19.degree., are similarly prepd. 3-Ethylphenoxazine (II) is prepd. by refluxing 15 min. 150 cc. ethylene glycol, 28 g. I, and 21 cc. 78% aq. N2H4.H2O, 21 g. KOH in 75 cc. hot ethylene glycol added, the mixt. refluxed 1 hr. before dehydration at 195.degree., after 3 hrs. reflux cooled at 100.degree., 500 cc. EtOH and 750 cc. H2O added, the ppt. washed with H2O, dried at 60.degree. under vacuum, and distd. to afford 21 g. II, b0.7 170.degree., m. 110-12.degree.. 3-Acetylphenoxazine-10-carboxylic acid chloride is prepd. by adding 17 cc. 30% COCl2-toluene to 5.5 g. I in 12 cc. toluene and heating at 125.degree. during 3 hrs. After cooling and evapg. to dryness, the residue is dissolved in C6H6, treated with active C, and crystd. to yield 6 g. product, m. 149-51.degree.. 3-Ethyl-10(.beta.-diethylaminoethyl)phenoxazine is prepd. by refluxing 45 min. a stirred mixt. of 4.2 g. II, 0.78 g. NaNH2, and 15 cc. anhyd. toluene and adding 3.4 g. .alpha.-chloro-.beta.-diethylaminoethane-HCl in 6 cc. anhyd. toluene. After 2 hrs. refluxing then cooling, 30 cc. H2O is added, the aq. layer extd. with 3 cc. C6H6, and the joined org. solns. washed with H2O and dried. Distn. yields 4.13 g. base, b1 210.degree.; hydrochloride m. 158-60.degree.. This procedure is applied to prepn. of the following products: 3-ethyl-10-(.gamma.-dimethyl-aminopropyl)phenoxazine, b1 200.degree., hydrochloride, m. 208-9.degree.; 3-ethyl-10-[.beta.-(N'-methylpiperazino)ethyl]phenoxazine, b0.6 210.degree., in 4.51-g. yield from 5.1 g. .alpha.-chloro-.beta.(N'-methylpiperazino)ethane, di-HCl salt, m. 267-9.degree. (decompn.); 3-ethyl-10-[.gamma.-(N'-methylpiperazino)propyl]-phenoxazine, b1 230.degree., di-HCl salt, m. 256-7.degree. (decompn.); 3-ethyl-10-(.gamma.-dimethylamino-.beta.-methylpropyl)phenoxazine, b1 190.degree., acid fumarate, m. 143-6.degree.; 3-ethyl-10-(-.gamma.-diethylamino-.beta.-methylpropyl)phenoxazine, b0.3 190.degree., acid fumarate, m. 126-9.degree.; 3-ethyl-10-(.gamma.-pyrrolidino-.beta.-methylpropyl)phenoxazine, b0.25 190.degree.,

hydrochloride, m. 173.degree.; 3-ethyl-10-[.gamma.-(N'-methylpiperazino)-.beta.-methylpropyl]phenoxazine, b0.25 210.degree., di-HCl salt, m. 215-7.degree.; 3-ethyl-10-(.gamma.-diethylaminopropyl)phenoxazine (IIa), b0.9 210.degree., acid succinate, m. 119-21.degree.. IIa is also obtained by adding successively with stirring 4.2 g. II and 3.15 g. 1,2,3-trichloropropane to 0.505 g. Na in 20 cc. liquid NH3 contg. a crystal of Fe(NO3)3. After NH3 evapn., the residue is treated with H2O and Et2O, the ether soln. washed, dried,and evapd., the residue mixed with 13 cc. toluene contg. a small amt. of powd. Cu and 2.92 g. Et2NH, after heating at 100.degree. 48 hrs. and cooling H2O added, the aq. layer extd. with Et2O, the joined org. solns. washed, dried, and evapd., and distd. to yield 2.07 g. base, b0.6 200.degree.. 3-Ethyl-10-(.gamma.-pyrrolidinopropyl)phenoxazine, b0.7 210.degree., is similarly obtained in 2.57-g. yield from 2.85 g. pyrrolidine to afford 1.9 g. corresponding hydrochloride (IIb), m. 174-5.degree.. IIb is also obtained by heating at 100.degree. 48 hrs. 4.5 g. 3-ethyl-10-(.gamma.-bromopropyl)phenoxazine (III), 2.12 g. pyrrolidine, and powd. Cu in 10 cc. anhyd. toluene and converting the base into the corresponding hydrochloride in 1.6-g. yield.

Similarly, 3-ethyl-10-{.gamma.-[N'-(.beta.-hydroxyethyl)piperazino]propyl} phenoxazine, b0.2 260.degree., is obtained in 2.64-g. yield from 4.5 g. III and 3.9 g. N-(.beta.-hydroxyethyl)piperazine to afford 0.62 g. di-HCl salt, m. 238-40.degree.. II (12.6 g.) and 2.5 g. NaNH2 in 60 cc. xylene is refluxed 1 hr. before addn. of 10.8 g. 2-(3-chloropropoxy)tetrahydropyran in 20 cc. xylene, the mixt. refluxed 48 hrs., cooled, treated with H2O, the aq. layer extd. with Et2O, the joined org. solns. washed, dried, and evapd. to yield 12 g. crude 3-ethyl-10-[.gamma.-(2-tetrahydropyranyloxy)propyl]phenoxazine, b0.5 230.degree.. This is dissolved in 80 cc. 75% aq. EtOH contg. 1.5 cc. concd. HCl and refluxed 1 hr., after evapn. the residue suspended in Et2O and neutralized with NaHCO3, filtered, dried, and distd. to yield 7 g. 3-ethyl-10-(.gamma.-hydroxypropyl)phenoxazine, b0.5 210.degree., m. 37-40.degree.. This is refluxed 1 hr. with 12 g. PBr3 in 20 cc. CHCl3, cooled, stirred with NaHSO3 before washing with NaHCO3, the org. layer dried, and evapd. to yield 9 g. crude III. Prepn. of 3-ethyl-10-(.beta.-piperidinopropyl)phenoxazine (IV): II (8.4 g.), 1.56 g. NaNH2, and 25 cc. toluene is refluxed and stirred 45 min., cooled before addn. of 2.9 g. propylene oxide, the mixt. stirred at 20.degree. 5 hrs., left overnight, treated with H2O, the aq. layer extd. with C6H6, the joined org. solns. dried, and distd. to yield 5.35 g. 3-ethyl-10-(.beta.-hydroxypropyl)phenoxazine (IVa), b0.4 190.degree.. p-Toluenesulfonyl chloride (9.32 g.) in 20 cc. pyridine is slowly added with stirring at 0.degree. to 12.46 g. IVa in 15 cc. pyridine, after 1 night at room temp.

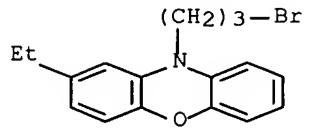
500 cc. H2O added, the oil washed with H2O, dissolved in C6H6, the soln. dried before evapn., and the oily residue crystd. slowly to yield 11 g. .beta.-[.alpha.-(3-ethyl-10-phenoxazinyl)propyl] p-toluenesulfonate (IVb), m. 87-90.degree., after washing with EtOH and drying. IVb (5 g.) and 2 g. piperidine in 30 cc. propanol is heated at 100.degree. 40 hrs., after evapn. the residue treated with H2O and Et2O, the ether soln. washed with 10% NaOH then H2O, extd. with N/10 HCl, made alk. with NaOH, extd. with Et2O, the org. soln. dried, and distd. to yield 1.35 g. IV, b0.5 200.degree.; IV hydrochloride m. 201-3.degree. (abs. EtOH). 3-Ethyl-10-(.beta.-diethylaminopropyl)phenoxazine, b0.3 180.degree., is similarly prepd.; hydrochloride m. 176-80.degree. 3-Acetylphenoxazine-10-carboxylic acid .beta.pyrrolidinoethyl ester hydrochloride is prepd. by refluxing 5.75 g. 3-acetylphenoxazine-10-carboxylic acid chloride and 2.4 g. pyrrolidinoethanol in 20 cc. C6H6, during 15 hrs. After cooling the ppt. is treated with 50 cc. Et2O to yield 5.03 g. product, m. 181-3.degree. (decompn.) (acetone and drying in vacuum at 80.degree. in the presence of P2O5). This procedure is applied to the prepn. of the following compds.: 3-acetylphenoxazine-10-carboxylic acid .gamma.-diethylaminopropyl ester hydrochloride, m 141-2.degree.; 3-acetylphenoxazine-10-carboxylic acid .gamma.-dimethylaminopropyl ester hydrochloride (V), m. 126-30.degree.; 3-acetylphenoxazine-10-carboxylic acid .gamma.-pyrrolidinopropyl ester hydrochloride, m. 141-3.degree.. 3-Acetyl-10-(.gamma.-dimethylaminopropyl)phenoxazine hydrochloride (VI) is prepd. as follows. V (6.9 g.) and 80 cc. H2O is washed with Et2O, made alk. with NaOH, extd. with Et2O, the ether soln. washed, dried, and evapd. to afford the ester, m. 63.degree.. After decarboxylation at 200.degree./16 mm. and distn., the oil, b0.2 220.degree., is dissolved in Et2, the soln. filtered, extd. with 50 cc. N/3 HCl, washed with H2O, the aq. solns. made alk., extd. with Et2O, the org. solns. dried, evapd., and the residue treated by HCl gas in EtOH-Et2O to yield 4.2 g. VI, m. 246-7.degree.. 3-Acetyl-10-(.gamma.-pyrrolidinopropyl)phenoxazine hydrochloride, m. 215-16.degree., is similarly prepd. 3-Acetyl-10-(.gamma.,-pyrrolidinoethyl)phenoxazine hydrochloride, m. 226-8.degree., is obtained in 4.4-g. yield by refluxing 6 hrs. 5.75 g. 3-acetylphenoxazine-10-carboxylic acid chloride and 5 g. pyrrolidinoethanol in 20 cc. C6H6, by decarboxylating the product at 200.degree., and by treating the oil, b0.5, 230.degree., as in the previous procedure. The following products are similarly prepd.: 3-acetyl-10-(.gamma.-dimethylaminopropyl)phenoxazine, b0.4 225.degree., hydrochloride, m. 246-7.degree. (abs. EtOH); 3-acetyl-10-(.gamma.-diethylaminopropyl)phenoxazine, b0.2 220.degree., hydrochloride, m. 173-4.degree.; 3-acetyl-10-[.gamma.-(N'-methylpiperazino) propyl] phenoxazine, b0.2 240.degree., di-HCl salt, m. 270-1.degree. (decompn.); 3-acetyl-10-(.gamma.-dimethylamino-.beta.-methylpropyl)phenoxazine, b3 210.degree.; hydrochloride, m. 224-5.degree.; 3-acetyl-10-(.gamma.-pyrrolidino-.beta.-methylpropyl)phenoxazine, b0.5 230.degree., hydrochloride, m. 200.degree. (decompn.); 3-acetyl-10-[.gamma.-(N'-methylpiperazino)-.beta.-methylpropyl]phenoxazine, b0.4 240.degree.,

di-HCl salt, m. 242-4.degree. (decompn.).

IT **93436-45-4**, Phenoxazine, 10-(3-bromopropyl)-2-ethyl-
95623-30-6, Phenoxazine-10-ethanol, 2-ethyl-.alpha.-methyl-, p-toluenesulfonate **103798-19-2**, Phenoxazine-10-carbonyl chloride, 2-acetyl-
(prepn. of)

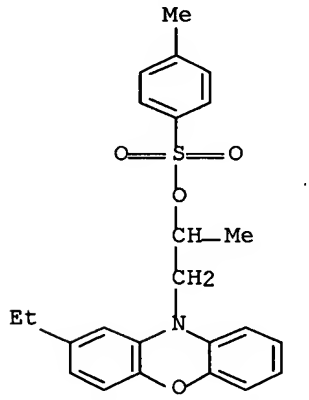
RN 93436-45-4 CAPLUS

CN Phenoxazine, 10-(3-bromopropyl)-2-ethyl- (6CI, 7CI) (CA INDEX NAME)



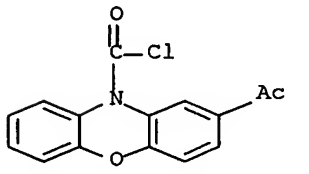
RN 95623-30-6 CAPLUS

CN Phenoxazine-10-ethanol, 2-ethyl-.alpha.-methyl-, p-toluenesulfonate (6CI, 7CI) (CA INDEX NAME)



RN 103798-19-2 CAPLUS

CN Phenoxazine-10-carbonyl chloride, 2-acetyl- (6CI) (CA INDEX NAME)



L4 ANSWER 86 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1960:2359 CAPLUS
DN 54:2359
OREF 54:586d-i
TI Phenoxazine compounds
PA Recherche et industrie therapeutiques R.I.T., S.A.
DT Patent
LA Unavailable
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI BE 569697		19590124	BE	

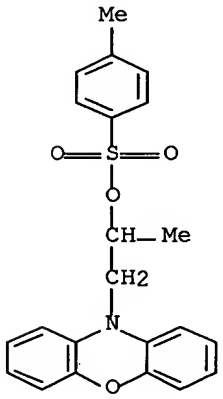
AB Prepn. of new anesthetics and analgesics, potentiators and deconnectors of the vegetative nervous system was described. Phenoxazine (7.32 g.) and 1.56 g. NaNH2 in 20 cc. anhyd. toluene was refluxed with stirring during 1 hr., 15 cc. toluene contg. .alpha.-chloro-.gamma.-dimethylaminopropane (prepd. from 7 g. corresponding HCl salt) added, after 2 hrs. refluxing the mixt. cooled, treated with 30 cc. H2O, the aq. phase extd. with C6H6, the org. solns. dried, evapd., the residue dissolved in 100 cc. ligroine (b. 40-60.degree.), the insol. phenoxazine recovered, and the soln. distd. in vacuo to yield 6.3 g. oil, b0.5 190.degree., treated with HCl-abs. EtOH then Et2O to yield 5.85 g. crude 10-(.gamma.-dimethylaminopropyl)phenoxazine hydrochloride (I), m. 132-4.degree. (Me2CO). Similarly prepd. were: 10-(.beta.-diethylaminoethyl)phenoxazine hydrochloride, m. 167-9.degree. (base b1 190.degree.); 10-(.beta.-pyrrolidinoethyl)phenoxazine hydrochloride, m. 203-5.degree. (base b0.2-0.3 170.degree.); 10-(.beta.-morpholinoethyl)phenoxazine hydrochloride, m. 226-7.degree. (base b1-2 170.degree.); 10-(.gamma.-diethylaminopropyl)phenoxazine H succinate, m. 112-15.degree. [picrate m. 138-42.degree. (decompn.)]; 10-(.gamma.-pyrrolidinopropyl)phenoxazine hydrochloride (II), m. 162-3.degree. (base b3 220.degree.); 10-(.gamma.-pyrrolidino-.beta.-methylpropyl)-phenoxazine hydrochloride, m 170-1.degree. (base b0.8 200.degree.); 10-(.gamma.-diethylamino-.beta.-methylpropyl)phenoxazine hydrochloride, m. 156-8.degree. (base b0.5 190.degree.); 10-(.beta.-dimethylaminopropyl)phenoxazine picrate, m. 154-5.degree. (decompn.), and hydrochloride, m. 175-7.degree. (base b1-2 160-70.degree.)]; 10-(.beta.-diethylaminopropyl)phenoxazine hydrochloride, m. 208-10.degree. [base b1 180.degree.; picrate m. 152-3.degree. (decompn.)]; 10-(.beta.-diethylaminoisopropyl)phenoxazine hydrochloride, m. 162-4.degree. [picrate m. 152-3.degree. (decompn.)]; 10-(.beta.-hydroxypropylphenoxazine, b0.5 195.degree., m. 95-8.degree. (p-toluenesulfonate m. 136-8.degree.); 10-(.beta.-pyrrolidinopropyl)phenoxazine hydrochloride, m. 198-201.degree.; 10-(.gamma.-piperidinopropyl)phenoxazine hydrochloride (III), m. 197.degree. (Et2O-alc.), from Et .beta.-(10-phenoxazinyl)propionate, b2 210.degree., via 10-(.gamma.-hydroxypropyl)phenoxazine, b0.8 200.degree., and .gamma.-[.alpha.-(10-phenoxazinyl)]-propyl p-toluenesulfonate, m. 52-4.degree. and 158.degree.. Phenoxazine (7.32 g.) was added to 1.01 g.

Na in 40 cc. NH4OH contg. 1 crystal Fe(NO3)3, the mixt. stirred 15 min., 6.3 g. .alpha.-bromo-.gamma.-chloropropane slowly added, the NH3 evapd., the residue treated with H2O, extd. with Et2O, the ether evapd., 25 cc. anhyd. toluene, powd. Fe, and 5.68 g. pyrrolidine added to the residue, the mixt. heated at 100-10.degree. 48 hrs., after H2O extn. the org. layer dried, and distd. to yield 7.6 g. base, b0.5 190.degree., converted into 6.8 g. II, m. 160-2.degree.. The same procedure with piperidine yielded III, m. 197-9.degree., with Pr2NH yielded 10-[.gamma.-(di-n-propylamino)propyl]phenoxazine, b1 210.degree. (hydrochloride m. 152-3.degree.), with morpholine yielded 10-(.gamma.-morpholinopropyl)phenoxazine, b1 230.degree. (hydrochloride m. 195-6.degree.).

IT **95137-74-9**, Phenoxazine-10-ethanol, .alpha.-methyl-, p-toluenesulfonate **95137-75-0**, Phenoxazine-10-propanol, p-toluenesulfonate
(prepn. of)

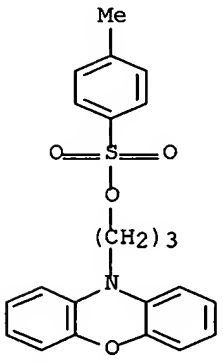
RN 95137-74-9 CAPLUS

CN Phenoxazine-10-ethanol, .alpha.-methyl-, p-toluenesulfonate (6CI, 7CI) (CA INDEX NAME)



RN 95137-75-0 CAPLUS

CN Phenoxazine-10-propanol, p-toluenesulfonate (6CI, 7CI) (CA INDEX NAME)



L4 ANSWER 87 OF 87 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1959:94876 CAPLUS
DN 53:94876
OREF 53:17154f-i,17155a-c
TI Diquaternary ammonium compounds
IN Caldwell, Albert G.
PA Wellcome Foundation Ltd.
DT Patent
LA Unavailable
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 811643		19590408	GB	

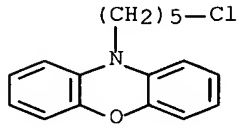
AB RR1N(CH2)nNR2(CH2)mNR3R4 (I) compds. (R = R1 = Ph, or, together with the adjacent N, form a carbazole, phenoxazine, or phenothiazine ring system; n = 3-9; R2 = H or Me; m = 2 or 3; R3 = R4 = Et, or together with the adjacent N form a piperidine, morpholine, or pyrrolidene ring) are converted to diquaternary (N atoms bearing R2 and R3R4) salts, the dimethiodides being ganglion-blocking agents. A few small pieces of Na and a crystal of Fe(NO3)3 added to 600 ml. cooled, stirred liquid NH3, the remainder of 7.8 g. Na added when the soln. was colorless, the soln. stirred 1 hr., 50.7 g. Ph2NH added in 20 min., stirring continued 1 hr., 65.5 g. Cl(CH2)4I added dropwise in 30 min., the mixt. stirred and cooled 1 hr., the NH3 let evap. at room temp., the residue extd. with hot light petroleum (b. 60-80.degree.), the solvent evapd. and the residue distd. gave Ph2N(CH2)4Cl (II), b0.05 124-8.degree., II (7.8 g.) and 8.5 g. .beta.-piperidylethylmethylamine in 25 ml. EtOH refluxed 6 hrs., the soln. evapd. to dryness, excess dil. HCl added, the soln. washed with CHCl3, made alk. with aq. NaOH, extd. with CHCl3, the ext. dried and distd. gave I (R = R1 = Ph; R2 = Me; NR3R4 = piperidino; n = 4; m = 2), b0.01 168-70.degree.; dihydrochloride, plates m. 230-2.degree. (iso-PrOH); dimethiodide, needles, m. 172-4.degree. (EtOH). Similarly the following I and their salts were prepd. [RR1N, n, NR3R4 (R2 = Me and m = 2 except as noted), b.p./mm. (salts and their characteristics) given]: Ph2N, 4, morpholinol, 180-2.degree./0.05 (di-HCl salt m. 221-3.degree.; dimethiodide m. 192-4.degree.); Ph2N, 4, Et2N, 167-70.degree./0.04 (dimethiodide, m. 115-18.degree.); Ph2N, 4, 1-pyrrolidyl, 174-81.degree./0.04 (di-HCl salt m. 221-3.degree.; dimethiodide, m. 186-8.degree.); Ph2N, 5, piperidino, 188-90.degree./0.01 [di-HCl salt m. 207-9.degree.; dimethiodide, 207-9.degree. (effervescence)]; Ph2N, 5, Et2N, 170-3.degree./0.01 [dimethiodide, m. 217.degree. (effervescence)]; Ph2N, 5, morpholino, 192-8.degree./0.01 [di-HCl salt m. 200-2.degree.; dimethiodide, m. 206.degree. (effervescence)]; Ph2N, 5, 1-pyrrolidyl, 179-86.degree./0.05 [dimethiodide, m. 225.degree. (effervescence)]; Ph2N, 9, piperidino, - [isolated as the di-HCl salt, m. 235.degree. (decompn.); dimethiodide, m. 190-2.degree. (iso-PrOH)]; 9-carbazolyl, 5, piperidino, 217-19.degree./0.01 (di-HCl salt, prisms, m. 226-30.degree.; dimethiodide, light brown powder, low indefinite m.p.); 9-carbazolyl, 5, 1-pyrrolidyl, 210-14.degree./0.02 (dimethiodide, low indefinite m.p.);

9-carbazolyl, 5, morpholino, 214-16.degree./0.02 [dimethiodide, m. 196-8.degree. (effervescence)]; 10-phenoxazyl, 5, morpholino, -[isolated as bis(hydrogen oxalate), plates, m. 200.degree. (effervescence) (H2O); dimethiodide, plates, m. 210.degree. (decompn.) (H2O); methiodide, needles, m. 158-60.degree. (iso-PrOH)]; 10-phenothiazinyl, 3 (R2 = H), Et2N, 192-4.degree./0.01 [di-HCl salt plates, m. 148-50.degree. (iso-PrOH-ligroine); dimethiodide hydrate (R2 = Me), softened 75-80.degree., m. about 100.degree. (effervescence) (iso-PrOH); 10-phenothiazinyl, 4 (m = 3; R2 = H), morpholino, 230-4.degree./0.01 [di-HCl salt, needles, m. 218-20.degree. (moist iso-PrOH); dimethiodide, m. 95-105.degree. (R2 = Me) (EtOH)]; 10-phenothiazinyl, 5, piperidino, 213-18.degree./0.01 [bis(hydrogen oxalate), plates, m. 195-8.degree. (H2O); dimethiodide, m. 147-50.degree. (EtOH)]. Intermediate RR1N(CH2)nCl prepd. were (RR1N, n, b.p. at 0.01 mm. or m.p. given): Ph2N, 5, b. 136-7.degree.; Ph2N, 9, b. 170-2.degree.; 9-carbazolyl, 5, m. 60-1.degree. (blue fluorescence) (MeOH); 10-phenoxazinyl, 5, 57-8.degree. [ligroine (b. 40-60.degree.)]; 10-phenothiazinyl, 3, m. 67-9.degree. (MeOH); 10-phenothiazinyl, 4, b. 164-6.degree.; 10-phenothiazinyl, 5, b. 172-4.degree..

IT **101573-70-0**, Phenoxazine, 10-(5-chloropentyl)-
(prepn. of)

RN 101573-70-0 CAPLUS

CN Phenoxazine, 10-(5-chloropentyl)- (6CI) (CA INDEX NAME)



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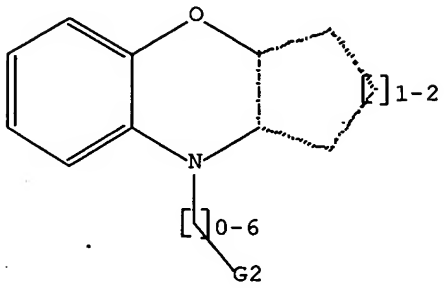
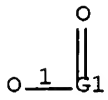
L1 STR





G1 C,S,P
G2 X,[@1]

Structure attributes must be viewed using STN Express query preparation.

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FILE 'REGISTRY' ENTERED AT 18:06:52 ON 14 NOV 2003
L1 STRUCTURE UPLOADED
L2 2 S L1
L3 63 S L1 FUL

FILE 'CAPLUS' ENTERED AT 18:07:45 ON 14 NOV 2003
L4 87 S L3

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	395.47	543.83

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-56.64	-56.64

STN INTERNATIONAL LOGOFF AT 18:08:52 ON 14 NOV 2003